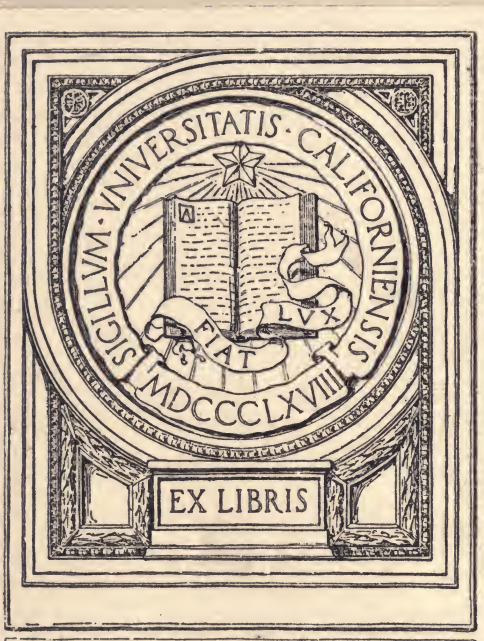
SIGILLVM · VNIVERSITATIS · CALIFORNIENSIS
LVX
FIAT
MDCCCLXVIII
EX LIBRIS

THE HEALTH OF THE SKIN

METHUEN'S HEALTH SERIES

Edited by N. BISHOP HARMAN, M.B., F.R.C.S.

Fcap. 8*vo*, 1*s. net.*

THROAT AND EAR TROUBLES
By MACLEOD YEARSLEY, F.R.C.S.

HEALTH FOR THE MIDDLE AGED
By SEYMOUR TAYLOR, M.D.

THE CARE OF THE TEETH
By A. T. PITTS, M.R.C.S., L.D.S.

THE EYES OF OUR CHILDREN
By N. BISHOP HARMAN, M.B., F.R.C.S.

THE CARE OF THE BODY
By FRANCIS CAVANAGH, M.D.

THE HEALTH OF THE SKIN
By GEORGE PERNET, M.D.

THE PREVENTION OF THE COMMON COLD
By OLIVER K. WILLIAMSON, M.A., M.D.

HOW TO LIVE LONG
By J. WATSON CARR, M.D.

THE HEALTH OF THE SKIN

BY

GEORGE PERNET, M.D.

METHUEN & CO. LTD.
36 ESSEX STREET W.C.
LONDON

First Published in 1916

CONTENTS

CHAPTER I

INTRODUCTORY

CHAPTER II

ANATOMY AND PHYSIOLOGY

CHAPTER III

PHYSIOLOGICAL AND MORBID VARIATIONS

CHAPTER IV

TOPOGRAPHICAL VARIATIONS

CHAPTER V

GENERAL HYGIENE AND BATHS

CHAPTER VI

CLOTHING

CHAPTER VII

SOAPS

CHAPTER VIII

COSMETICS OF THE SKIN

CHAPTER IX

THE HAIR

CHAPTER X

TATTOOING

CHAPTER XI

THE NAILS

THE HEALTH OF THE SKIN

CHAPTER I

INTRODUCTORY

IT is a common delusion to imagine that the skin is a simple membrane or covering drawn over the muscles and bones of the body and of very little importance as compared with the nerves and blood-vessels, to say nothing of such organs as the liver and lungs for instance. The truth is that the skin is a vital, complicated structure. In its development from the fertilized human egg, it may be first noted that the skin arises from the same layers of cells in the embryo as the brain, spinal cord and nerves generally. Indeed the skin is a wonderful fan-like expansion directly connected with the central nervous system, and is like the eye and ear an organ of sense, viz. the sense of touch.

The skin or integument of the body may be aptly compared to an admirable casing, which not only separates us from the surrounding atmosphere and the earth on which we have our being, thereby making us the individuals we are, but it also acts as an outpost of scouts as it were to warn us of outside

conditions and protect us from dangers. This was quaintly expressed by a seventeenth-century writer, Phineas Fletcher,—in a poem on the human body called 'The Purple Island,' in which the skin is described as

> '. . . that round spreading fence,
> Which like a sea, girts th' Isle in every part;
> Of fairest building, quick, and nimble sense,
> Of common matter, fram'd with special art;
> Of middle temper, outwardest of all,
> To warn of ev'ry chance that may befall:
> The same, a fence and spy; a watchman and a wall.'

The skin responds to changes of temperature, to pressure, and in ordinary states of health, allows us to distinguish variations in the amount of heat and cold in objects coming into contact with it. The skin is a great tactile sense-organ directly linked up with the brain. Moreover the skin in this way co-operates with other sense-organs, such as the eye for instance. Thus it is the child gradually gains experience of surrounding bodies, not only by seeing them, but by feeling them too. This tactile sense together with the impulses from the other sense-organs slowly build up consciousness in the growing child.

The relations of the body-covering to the heart, lungs, kidneys and so forth are constantly being brought into play. Thus hot applications by flushing the skin and stimulating the nerves may relieve the heart. Cold water suddenly coming into contact with the skin makes one catch one's breath. Cold

water to the head as at the end of a shampoo activates the respiratory movements. In cold weather again, the fact that the blood-vessels of the surface become contracted and the parts pale, leads to extra activity of the kidneys. Touching a hot metal immediately leads to involuntary action of the muscles through messages sent to the central nervous system which are at once reflected by nerve messages to the muscles connected with the part endangered. In a similar way too, a baby will support its weight by grasping a stick or branch. Flicking the face with a wet towel or dashing cold water on it as in faints acts on the nervous system through the bulbous upper end of the spinal cord close to the brain, the *medulla oblongata* as it is called. Counter-irritation by means of mustard leaves and mustard foot-baths, as also tickling the nostrils with a feather and ' firing ' the skin with a cautery, act in a similar way. Among the Chinese, acupuncture or driving needles of different sizes and lengths into the skin is a common method of treatment. They are also fond of applying caustics. One way they have of cauterizing is to burn the flowers of the amaranthus on the skin. Putting a cold key down the back for bleeding of the nose depends on the same idea. Even fanning the face makes a difference to the mental processes.

The estimation of weight by holding an object in the hand and testing the smoothness or otherwise of a surface by passing the fingers over it are further examples of the importance of the skin in everyday life. Though as to weights and resistance to pres-

sure other factors, such as the muscles and joints, come into play as well. It is through this tactile sense that the blind are able to read the Braille relief type and get ideas about solid bodies and surfaces.

Further than this, emotional conditions may operate as a result of ideas arising in the brain and express themselves in the skin, such as blushing with shame or from timidity and flushing with pleasure. Or contrariwise, fear and terror acting on the superficial blood-vessels lead to pallor of the skin and to the breaking out of a cold sweat.

We have mentioned the eyes in connexion with the skin. Their relationship is very close, for in the life-changes, which take place in the human individual at an early period, the front parts of the eye arise from a pushing in of the skin from the surface, thus meeting the nerve elements which are pushed out from the primitive brain. In this manner the two parts together form the organ of vision. The same may be said of the ears and other orifices. But in so doing the skin takes on special appearances, which serve to distinguish them from the general body-covering. Moreover, if we look at the integument, we will at once notice that the skin varies in certain ways from part to part of the body.

CHAPTER II

ANATOMY AND PHYSIOLOGY

IN this place, we may well consider the actual structure of the skin in a more detailed manner. The skin consists of two parts : the epidermis, which forms the surface and protective layer of the body, and the true skin or *corium* or *cutis* immediately beneath. The former sends cone-like prolongations down into the true skin, whereas the latter sends up cone-like projections, the two fitting together and forming one structure, except in diseased conditions.

When the skin is abraded, as in barking the shins for instance, the epidermic layer (or cuticle and scarf-skin of ordinary language) is separated from the underlying bleeding true-skin or corium. The epidermis is soft and moist at its growing point of juncture with the true skin. As it grows, its component cells become harder and flatter as they rise to the surface of the body, where they become horny. In this way a waterproof covering is formed, which prevents fluids from without soaking in and the fluids of the corium escaping outwardly. From this rough description it will be readily understood how important is the part played by the outer covering of the skin or epidermis. When its superficial

or horny layers are removed either physically or as a result of destruction by caustic applications and irritating fluids, or again shed rapidly as in acute inflammatory diseases of the skin, oozing takes place from the unprotected surface, as in the well-known example of ' weeping ' eczema as it is popularly called. In burns of a certain degree, blisters form as a consequence of the escape of fluid beneath, which either raises the epidermis bodily in a dome-shaped manner or splits it up in layers. In bad burns, that is of a high degree, the epidermis is destroyed leaving the naked corium beneath. It is this which makes this class of burns when extensive so dangerous to life, owing to the shock to the general nervous system, and which moreover takes them long to heal and leaves disfiguring and unsightly scars behind. I think it right to say here how foolish it is to dress people up in wool as is often done at Christmas and other gatherings, for if the wool catches fire by some unlucky accident the results may be fatal, or if not, the scarring of the face especially may be very serious and disfiguring, to say nothing of injuries to the eyes. In the case of a young woman, who came ultimately under my care for the results of an accident of this very kind, the scarring stretched round the face from ear to ear, including the region round the mouth. But ' against stupidity, the gods themselves fight in vain,' so there will be further cases recorded from time to time.

An insensible shedding of the horny layers of the

skin is constantly taking place, what time fresh layers of horny cells are being formed from below. In some animals this moulting takes the shape of a complete shedding of the epidermis as in snakes. In frogs, shedding occurs in irregular shreds. The moulting of feathers in birds is well known, and in dogs the coat sheds many hairs at times. In deer, changes occur in the horns and antlers, as anyone can see for himself at the Zoo or in Richmond Park. The changes observed in the skin of the drowned are due to the soaking of the epidermis combined with putrefaction.

The importance of the epidermis in its development from the outer layer of the original simple structures into which the egg divides at an early period of its existence and its intimate connexion with the nervous system has already been touched upon. But it is further related in origin to the covering of some parts of the mouth, nasal passages, and also of the rectum and generative organs. Moreover, in its development, the epidermis arises from the same original cells as the enamel of the teeth.

The true skin, derm or corium is the important part of the skin containing as it does blood-vessels, both arteries and veins, lymphatic channels, and nerves, all held in place by a framework of connective tissue, which is itself made up of various bundles, some of them elastic. As time goes on, the skin proper loses its succulence and elasticity, and then wrinkles appear. The elastic constituents resist

extension, and strips of skin will bear weights up to a certain point, beyond which they lose their powers of rebound, as in the case of over-stretched rubber bands.

The blood-vessels form two parallel systems, the deeper one at the lower limit of the true skin being made up of larger arteries and veins than the superficial one lying just below the epidermis, the latter sending loops of small arteries and veins into the cone-like projections of the corium we have just alluded to. The two systems are connected up by arteries and veins, which come from the deeper system. Nor must we here omit to mention the blood itself which circulates in the vessels. The lymphatic channels permeate the true connective framework and serve to nourish the skin. They play a part in morbid and inflammatory conditions.

The curious notions of school-children as to the skin are well exhibited in the following examination answer: 'We have an upper and a lower skin. The lower skin moves all the time and the upper skin moves when we do.' This answer requires some looking into. That 'the upper skin is called eppederby and the lower skin is called derby' is rather sporting.

The fact that the skin is vascular has led empirically to the employment of counter-irritation and poulticing to relieve congestion and inflammation of underlying organs. The action of the mustard-leaf in this way is well known. In the old days, cupping was a common procedure, which under another name has been revived in an improved manner in

the actual treatment of certain skin conditions. Cupping was either dry or wet. In the latter there were fine lancets in the cupping-glass which were released by a spring or trigger in order to let blood from the skin by scarification, or scarification was done first and the cupping-glass applied afterwards. Venesection or letting blood from a vein was also in common use in bygone days. This was done at certain times of the year in the sound as a matter of routine and no doubt it was often beneficial in the full-bodied and plethoric. In the sick, blood-letting in this way was abused and frequently improperly employed. In Le Sage's novel 'Gil Blas,' the character of Dr. Sangrado was intended as a satire on what obtained at that period. He treated all his patients without exception by bleeding and making them drink quantities of water. Gil Blas, his factotum, followed in his footsteps and had to disappear very hurriedly after treating a great dignitary of the Church in this way. Howbeit, there is no doubt that in certain circumstances bleeding, or phlebotomy as it was called, is very useful. But the lancet of our forefathers has gone out of fashion. In Tunis some years ago I noticed a sign over a shop intimating that the owner was a barber and phlebotomist. The brass sign that still dangles at the door of barbers' shops on the Continent was the dish that received the blood and the barber's pole now seldom seen, with its red and white stripes, was the symbol of the staff the customer firmly grasped in his hand to make the vein of the arm stand out for the lancet.

Leeches have largely gone out of fashion with us, but there is no doubt they may be of use in certain circumstances. They leave a tri-radiate mark on the skin.

If we now turn to the cutaneous nervous elements we find they are of an extremely delicate structure. It is they that make the skin an organ of sense. In some parts, as in the finger tips, the nerve elements terminate in complex minute bundles, which make it possible for the hands to carry out not only the hundred and one things which come our way in our daily lives, but to do the fine work of the artist, thus ensuring precision of movement in combination with the organs of vision and of hearing, and the muscles, as in the painter and the musician. Moreover, the nerves of the skin act on the blood-vessels by contracting them and making their calibre smaller. On the other hand, interference with their action leads to vascular dilatation, hence congestion, the first stage of inflammation. As already stated the skin is linked up with the nervous system generally, and with the various nerve centres which act on the breathing, the circulation, and on the functions of the bowels and of the reproductive organs.

The sensitiveness of the skin led to a horrible form of torture in the old days, i.e. flaying alive. The soles of the feet are very sensitive as every one knows. Punishment by the bastinado as among the Turks is a refined mode of punishment. In certain conditions, areas of skin may become insensitive, when even sharp pricks are not felt. In mediæval times,

when individuals were supposed to be possessed of devils, these insensitive parts were sought out by means of sharp-pointed instruments and when found were considered to be positive evidence of such possession.

About the rounded and fleshy parts of the body, the skin rests on and is connected with a layer of fatty material, the adipose tissue, which forms a cushion. The fat is specially well developed about the abdomen, the buttocks, thighs and breasts. Among the Hottentots the abnormal development of fat about the buttocks is a racial characteristic. This steatopyga is well exemplified in the Hottentot 'Venus,' a model of which exists in the London College of Surgeons' Museum.

But this is not all; there are also important skin appendages to be considered. They are the hairs and fatty glands, the sweat apparatus and the nails.

As to the hairs and fatty or sebaceous glands, they pervade the surface of the body in varying proportions. They form with minute muscles the pilo-sebaceous system. The hairs arise from the outer layer of the skin, the epidermis, and are fed by vascular loops from the true skin at their lower end. The root-part of the hairs dips into the fatty layer supporting the skin of the body generally, except in parts devoid of fat. The hair itself is as we have said nourished by a loop of the small arteries and veins previously described and grows in the hair-follicle or tube, which goes through the corium and epidermis to reach the surface. Connected with the

hair is a fat-gland, which opens into the hair-follicle or tube and lubricates the hair which is inserted at an angle. Working on the lower part of the hair is a delicate strand of muscle-tissue, on the same side as the fat-gland. When this small muscle comes into action, the hair is made to stand on end. This is the mechanism of goose-skin on the smooth parts of the body that look hairless, but which are not strictly so, for they present a fine downy growth which differs very much from the long and coarse hairs of the scalp, face, armpits and other parts :—

'Upstanding then like reeds, not hairs.'

There is a certain set of the hair on the scalp, which varies about the crown of the head in different individuals, forming circles and whorls.

In addition to the foregoing structures, there are the sweat-glands. These are also appendages of the epidermis. These sweat-glands are made up of coils or reservoirs in the parts below the true skin or corium. They discharge their fluid contents by means of a fine tube which zig-zag or corkscrew fashion finds its way through the corium and epidermis and has an outlet or sweat-pore on the surface of the skin. These coils are also under the dominion of nerve filaments and the state of the blood-vessels. Normally a small amount of quiet perspiration goes on, which is increased by exertion, heat, some emotions, and also as a reaction to a toxic or poisonous condition of the body, as in the night sweats of the consumptive and in rheumatic fever, for instance.

The skin retains its vitality for some time after removal from the body. In this way skin may be grafted from one part of the body to the other or from one person to another, as in plastic operations. Small portions of skin can be kept alive for some time by laboratory methods. As to the epidermis that has been employed for grafting too, and is the usual way of carrying out that procedure to cover denuded and ulcerated surfaces. Thin layers are shaved off with a sharp flat razor and transferred with certain precautions to the surface that requires to be treated. The soft living epidermic cells on the under surface of the pieces thus removed catch on and become adherent to the denuded parts, and in this way quite large areas can be dealt with. Another method was to snip off quite small bits of epidermis and dot them over the denuded surface here and there, new epithelium growing from them and joining up to cover in the ulcerated parts.

This vitality of the skin and the epidermis leads me to allude in passing to the electric phenomena in the shape of electric currents which were first observed and studied in the skin of frogs and later in fishes. The electric eel and torpedo-fish are well known; and, not so many years ago a man-torpedo was on show who gave shocks to people, but that is another story, the fish story being in this case the true one and the other artistic. The skin offers resistance to the passage of electric currents from without, a resistance which varies with the strength of the currents employed and also with the condition of the

skin. The skin, when dry, is more resistant than when it is wet, that is why in some forms of treatment, as in electrolysis for instance, the electrodes have to be moistened. Electric baths have little effect on the skin as a form of treatment, whatever may be the case in general conditions which do not come within the scope of this book. But it may be as well to say that catching hold of a source of electric power whilst in a bath may lead to fatal results. Accidents have occurred in this way and are occasionally reported in the papers. As to electric belts, they have not the vogue they had a few years ago. To expect any therapeutic action from such devices is a delusion. Admitting for a moment that slight currents are generated in the metallic discs of such belts, there is the resistance of the skin to be considered, and in addition, the fact that contrary neutralizing currents are set up in the discs. In these days of electric installations of various kinds, exact notions as to electric forces are becoming more and more prevalent, and that may account for the electric belt business being less flourishing than it was.

In the old days, the torpedo-fish was used in treatment by the Greek and Roman physicians. Aristotle pointed out that this fish numbs the fishes it preys upon for food, and Scribonius Largus, a Roman doctor, wrote that during the acute gouty attack a live black torpedo-fish applied to the foot, on the beach, until the foot and the leg up to the knee were numb, relieved the pain. As to the man-torpedo,

I came across the following in a recent criticism of a novel: 'Besides this he could at will suddenly liberate electricity from his hair, skin and nerves, like an electric eel, which paralyzed for a moment his opponent's grip.' This is somewhat exaggerated, but one must make allowance for writers of fiction. It is fortunate that this sort of thing does not occur in real life. Patients (women) occasionally state that their hair is electric and that sparks come from it when combing it. The hairs of a cat briskly rubbed become to some extent electric.

By means of special apparatus various substances can be driven into the skin electrically, that is to a certain extent, by ionization as it is called. This when employed legitimately is a useful form of treatment in some affections of the skin, but knowledge of the skin and the morbid changes which take place in it is requisite. Unfortunately electric treatment gets into the hands of ignorant people, much to the detriment of such methods. The word electricity is one to conjure with and wonders are promised and expected from its use.

From what has been said in this rapid survey of the architecture and functions of the skin, it will be readily seen that the integumental covering of the body is a complicated mechanism and not the simple covering it is generally supposed to be.

CHAPTER III

PHYSIOLOGICAL AND MORBID VARIATIONS

THIS complexity explains many skin conditions, for any one or more of the separate structures we have described may be either deficient or over active.

Thus there may be very little hair or it may be poor in quality. On the other hand its growth may be excessive and run in families, as in the case of the hairy Skye-terrier faced Russians who were a sensation some years ago in London. Or again one meets with bearded ladies among the freaks of Barnum shows. Some individuals may be more or less hairless like the hairless dogs. Hair varies too from race to race in appearance and quality, and ranges from that of the lank-haired North American Indian to that of the curly headed negro. Colour again varies greatly through all the shades of a chromatic scale, to say nothing of the artificial shades. Dyeing of the hair is a very ancient procedure. The much admired Venetian red of the Italian artists was artificial. In albinos, the hair is white from absence of pigment and this goes with pink eyes as in a well-known breed of rabbits. Rarely the absence of hair may be congenital, that is the patient may be born without hair, and remain hairless. This may

not only affect the scalp, but also other parts as well, which are normally hairy.

The skin may be deficient in sweat and in lubricating material and consequently be very dry and scaly. This dryness may be so marked as to give the skin the appearance of fish scales or a degree of crocodile skin aspect. The opposite of this condition is a great excess of the fatty secretion when the skin appears coarse, thick and oily. In negroes, this is often very obvious. Sweating, too, may be greatly in excess, especially about the palms, soles, armpits and so forth. In some cases localized areas of the body surface may exhibit excessive sweating and the other parts remain dry. The sweat in some instances may be very offensive and assume a dirty hue. The odours of the skin are various. According to Plutarch, Alexander the Great smelt of violets. On the other hand, Henry of Navarre and Louis the Fourteenth of France were an offence to others. In some conditions, the skin may smell like iris, or be unpleasant as in the case of the greasy and unwashed. Red-haired and some dark individuals are liable to smell strongly. There is also the odour of sanctity. We shall deal with some of these conditions more fully later on.

The colour of the skin generally needs merely to be mentioned in passing from the point of view of the variations which present themselves in the races of the globe. Among the Japanese, who are of mixed descent, babies exhibit pigmented patches about the buttocks, and this is looked upon as

a racial characteristic. But it has been observed among other Asiatic races and in those of negroid descent. In the two sexes of the same race the differences are well known. As to the individual, disease leads to colour changes in the skin, as in jaundice (which merely means yellow) for instance, 'yellow as a guinea' as the popular saying goes. The ancients called it *icterus*, the name of the golden oriole, and they thought that if a man suffering from jaundice looked steadily for some time at that bird, the bird died and the man lost his jaundice. Or changes in the distribution of the pigment may occur leading to the formation of white areas, which do not take on sunburn. When these white patches appear in dark and black skinned races, the contrast is very great and the individual becomes pie-bald. This is often referred to as the white leprosy, but as a matter of fact it has nothing to do with true leprosy. In these white-patch cases, the hair of the scalp may also be affected and permanently white tufts show in the midst of the otherwise dark hair. The famous white elephant of circus-shows is really an instance of this condition. But a white tuft of hair may be due to dyeing the other parts black or of a dark shade, the white lock being the natural colour of the hair as a whole.

Or the skin may be so lax and thin as in the so-called 'elastic skin' men, though this pulling out of the skin in large folds is really due to a want of the elastic constituents.

'My skin hangs about me like an old lady's gown.'
Henry IV.

Further the blood-vessels, lymphatic channels and nerves of the skin may all be interfered with as a result of disease, leading to blueness of the extremities, paroxysmal dead waxy fingers, alterations in sensation, and so forth.

Owing to the fact that the skin is so liberally supplied with special nerve terminals a variety of disordered sensations may ensue. The commonest is itching of the skin, which accompanies many cutaneous diseases. Sometimes this symptom is the dominant one and very intense, leading to great mental distress, which may verge on the suicidal, sleeplessness and interference with the body functions generally. Fortunately, a recent method of treatment, which relieves the central nervous system, usually acts most beneficially and in a rapid manner, proving experimentally, how intimately the skin and nerves are related to one another. On the other hand, continued mental stress and want of sleep may lead to a form of eruption on the skin, which when widespread is in itself so irritating as to lead to further depression of the sufferer, in a word to what is called a vicious circle. It is well known that shell-fish, strawberries and so forth may give rise to irritating rashes of the so-called nettle-rash type. Drugs and poisonous foods, such as tinned meats and so forth that have undergone putrefactive changes may also occasion outbreaks of this kind. When a tin is ' blown,' as it is called, the contents should be destroyed, for it shows that the stuff has undergone decomposition and given off

gases. Opium taken over long periods leads in some cases to great irritation of the skin. De Quincey, the author of that masterpiece of prose 'The English Opium Eater,' relating his experience of the drug, says: 'there arose a new symptom, viz. an irritation of the surface of the skin, which soon became insupportable and tended to distraction.' This irritation may also be observed in those who indulge in morphia.

Wounds of the skin should be attended to in a methodical manner, in order to prevent the entrance of disease germs. They should not be sucked by another person, for this has more than once led to infection of an unpleasant nature owing to the diseased condition of the mouth of the good Samaritan.

As to parasites, the presence of a single flea about the body in some individuals is sufficient to upset them considerably. A common disease is the itch itself. This is due to a minute mite or *acarus*, which is not a true insect, for it has eight legs in the adult or full-grown condition and is related to the spider family. The amount of scratching this small pest may cause may be very great and affect a considerable area of the skin. Scratching may occur during sleep as a result of what is called reflex action, the scratching waking the patient up. Napoleon the Great once suffered from itch and for a considerable time, as the cause was not then known to the medical profession. The Emperor was very angry with his medical attendants, because they could not cure him at once. Later, another Corsican, Renucci, a

medical man, brought the little mite, which is the cause of so much discomfort, to the notice of the profession. It is an interesting little female creature, which burrows under the superficial layers of the skin and there deposits its eggs. The young have six legs only, but later in life they develop eight legs by a process of moulting or metamorphosis. The male acarus was discovered much later by a French observer. The male roams about, leaving the lady in her bower. He is very difficult to find, and in my opinion this is probably due to the fact that the female makes a meal of him, after impregnation. This form of cannibalism is well known to occur among some spiders and insects. The itch is communicated either directly by one person to another or by means of contaminated bedding or clothing. In a book on Architecture and Domestic Engineering, Vitruvius, who lived in the time of Cæsar and Augustus, curiously enough refers to the itch and mentions pitch for its cure. Job, who complained so much of his 'boils and blaynes,' very possibly suffered from the itch. But pot-sherds are not to be recommended as a mode of treatment.

There are many other parasites that live on man and make a host of him for their food-supply. A common one in some districts at certain times of the year is the harvest bug, which attacks animals as well as human beings. In its early life it is carnivorous and lives on blood, but in the adult reproductive period of its existence it is a strict vegetarian. This mite attacks the legs chiefly in man,

and the rash it leads to may be very severe and troublesome. Dogs and rabbits may be affected in this way. And as to the former, the parasite may be communicated from them to man. The harvest-bug has even been brought to an invalid in one case in a bunch of flowers picked in a cornfield.

The body-louse occurs chiefly in the wretched and the flotsam and jetsam of our so-called civilization, those unfortunates who come down in the world and fluctuate from common lodging-house to common lodging-house. In many cases, such individuals are much to be pitied. It was a miserable sight in my student days to see these poor creatures snatching a few hours of disturbed sleep on the seats of the Thames Embankment in the early hours of the morning. What dreamed they? For there is no doubt that dreams may be started by irritation about the skin, just as the noise of a barking dog at night may act in the same way where it does not wake one up completely. In chronic cases of this condition of lousiness of the body, the skin becomes deeply pigmented and to this the name of vagabond's disease has been given. The louse is a wonderful little insect which lives on the blood of its host. It has a long proboscis, the extremity of which is provided with four minute hair-like structures. By their approximation, they form a stabbing point which perforates a superficial blood-vessel of the skin and the blood is then sucked or drawn up, probably by capillarity, into the insect's stomach.

If a louse is examined under the microscope after its aldermanic feast, the coils of intestine will be seen to be in active motion. This I thought some years ago I had discovered, but I found that Leeuwenhoek, a Dutch naturalist of the seventeenth century, had already noted the point. He considered the blood was thus kept in active motion to prevent its clotting, which would kill the animal. Lice breathe through the skin by a system of minute tubes or *tracheæ*. If these are occluded by any sort of sticky fluid or ointment, the insect dies. A common mode of treatment, i.e. the use of ordinary paraffin lamp oil is rational, but this should never be employed near a naked light or the patient's hair may catch fire and lead to a fatal issue, for burns about the head are very serious indeed.

It is a popular belief that the skin of some individuals breeds lice. This is quite an error, but I have no doubt this superstition will linger on for many years in spite of the schoolmaster being so much abroad in our age of so-called education. Lice are not spontaneously generated as such a notion would imply, though it is one that has received support from a statement by Aristotle, to whose authority everybody bowed down until Leeuwenhoek and Swammerdam in the seventeenth century showed the contrary. Aristotle said that 'nits' were sterile. As a matter of fact 'nits' are the eggs of lice, which in the hairs of the head are attached to them by the female insect. These 'nits' are firmly fixed to the hair by means of a cement

substance secreted by the insect. In dealing with children who have 'nits' it is therefore of the greatest importance to detach them by firmly wiping the hairs with an antiseptic solution, or better still cutting the hair off short and burning it. I have found it very difficult to make parents understand this origin of the insect, the idea that the latter are bred by the skin being so firmly rooted in the minds of many of them. Though in error, they are in good company, for Sulla the Dictator was supposed to have died as a result of these insects practically eating him up, in such numbers did he breed them in his skin, all of which may be read at large in Plutarch's 'Lives.' Recently it has been shown that lice were the conveyers of Typhus (not Typhoid) fever, which is seldom observed in England now. It occurs among tramps. This disease was no doubt the old jail-fever, of which an early English writer, Andrew Boorde, of the fifteenth to sixteenth century quaintly but truly remarked, that the way to prevent it was to keep out of jail.

It is well known now, thanks to scientific research, that various diseases are inoculated through the skin by the bites of insects, as malaria and yellow fever by certain mosquitoes, sleeping-sickness by a fly prevalent in certain parts of Africa, and plague by fleas. It is extremely important therefore, in the tropics especially, to protect the skin carefully by mosquito netting and suitable clothing, together with other precautions.

We have already alluded to nettle-rash, but there

is a condition of the skin in which constantly recurring attacks of wheals occur over long periods. In such individuals, stroking or touching the skin leads to wheal-like reactions. In the middle ages, sufferers of this kind were very unfortunately situated, for when they were accused of demoniac possession and sorcery, the fact that the imprint of the hand and fingers could be produced in relief by a forcible application of the outspread hand to the suspected person's back was deemed to be evidence of their guilt.

In some children, the skin may be easily upset in the way of nettle-rash reactions as a result of unsuitable foods and disturbances of the alimentary tract. In them, this skin trouble may be very obstinate and require suitable persevering treatment. In children again when flea-bites are numerous this may start a certain amount of nettle-rash. At any rate, such children are very miserable as a result of this. In North Africa among the various natives a small kind of flea is a veritable plague preventing all sleep. A French writer has recently pointed out that if this fleasomeness could be stamped out, the difficulties of the Algerian question would be solved.

Whilst on the subject of children, it is wise not to allow them to be kissed in a promiscuous way, by strangers especially, as serious infections have thus been caused through abrasions about the lips.

In some diseases, the sensations of the skin surface are altered as to heat, cold, pain and pressure owing to nerve disturbances. Or other changes may occur

in the texture of the skin, such as thinning or thickening over certain areas. In certain stages of leprosy, the surface of the skin may become soft and saponaceous to the feel, and this was taken advantage of in the old days in suspected lepers, by pouring water over the affected parts. In his 'Natural History of Selborne,' Gilbert White refers to a boy in the village, who had a kind of leprosy of a singular kind, since it affected only the palms and soles. It was a scaly eruption, which broke out twice a year. This was not leprosy at all, but a totally different malady. White adds that 'the good women, who love to account for every defect in children by the doctrine of longing, said that the boy's mother felt a great propensity for oysters which she was unable to gratify, and that the black rough scurf on his hands and feet were the shells of that fish. We knew his parents neither of which were lepers; his father in particular lived to be far advanced in years.' Here we have the maternal longings cropping up again.

Normally the skin develops simultaneously with the other structures: bones, muscles and so forth, but arrested development may occur as far as the integument is concerned and malformations be the result. Thus the branchial clefts may not close up properly and leave small openings in the neck. These branchial clefts are the gill-slits, which can be well seen in sharks and the dog-fish for instance, and are present in the early stages of development of the human embryo. In the higher group of fishes, the gill-slits are more highly differentiated

into gills as in herrings, mackerel and so forth. Or again, there may be gaps in the skin of the body, and it may be absent as also the corresponding underlying ribs. For when there are skin deficiencies other structures generally suffer too in a similar way. The skin may be absent owing to non-development over the lower part of the abdomen and the bladder be exposed in consequence. A web between the fingers may persist and two fingers, usually, sometimes be adherent to each other all the way up. Malformations of the skin occur too about the nose, eyelids, ears and mouth. In the last named situation hare-lip is not an uncommon deformity, often associated with incomplete development of the palate, in the condition known as cleft palate.

What is popularly supposed to be a deficiency in the number of skins is quite another malady, in which the patient, usually a male, bleeds considerably after wounds, extraction of teeth and so forth. They are called 'bleeders,' but this has nothing to do with their being short of a skin.

Viewing the skin as a whole, it is essentially an organ of protection, but in the case of man in the struggle for existence he has had to have recourse to the skins of other animals, to leather, to armour, to shield himself from his enemies.

Man is born naked and helpless, hence the difficulties in rearing, which must have been very great when he dwelt in caves and was surrounded by powerful foes, to say nothing of climatic changes. Fortunately man discovered fire, the only animal

who ever has, and this gave him an immediate and tremendous advantage. No wonder the gods of old punished Prometheus for stealing fire from the chariot of the sun, by chaining him to a rock, what time a vulture fed on his liver, which was never diminished in size though continually devoured. The gods knew that fire would be the emancipator of man. By means of fire, man was able to obtain warm baths and make soap, and thus keep his skin clean.

The fatty layer under the skin is important, and healthy babies have this layer well developed. In bears this adipose mass may be very considerable, and man made use of it in the shape of bear's grease for anointing the hair in early Victorian days. In some individuals the fat forms tumours under the skin. On points of pressure pads called bursæ may develop as a protection to the underlying parts, as the pad on the top of the head, for instance, in some of the men who unload heavy cases of oranges from vessels near London Bridge by carrying them on the head and the upper part of the back, and this notwithstanding the porter's knot.

Physiologically the skin regulates the body temperature. In this the sweat function plays an important part, but the nervous system also takes part in keeping up the equilibrium. In fevers these mechanisms are thrown out of gear and the temperature of the body goes up as it is said, leading to great discomfort, especially in severe and continued fevers. In feverish conditions, the sweat function is usually

in abeyance and the skin feels hot and dry. It is then that tepid sponging of the cutaneous surface is so grateful. After a certain time, a critical sweat may occur and the temperature come down.

In those who are exposed to the heat and glare of furnaces as in foundries and in the stoke-hole of ships, the sweating of the skin enables these workers to carry on their arduous labours. The loss of fluids by the skin have then to be made good by draughts of water to keep the balance even. All of which shows how important are the functions of the skin, a point on which it is necessary to insist again and again, for the general run of people are most ignorant about the matter. They talk a great deal about their livers—indeed the liver is a constant subject of conversation among us in England—but little thought is given to the cutaneous covering as an organ of multifarious activities.

The thickening of the skin about the hands and soles is well known, but skin changes of this kind occurring in certain parts of the body may give a clue to occupations and trades. These callosities are just alluded to in passing.

As to the colour of the skin, we have already touched lightly on this. In white, and especially fair individuals, and more so in children and infants, the rosiness of the skin is due to the vessels of the true skin or cutis or corium showing through. In some races, the yellow, brown and black, the pigment cells intervene and give rise to the variations in aspect. The changes of colour which take place

in the skin of the chameleon are well known. These are due to special large mobile pigment-cells set in motion by some stimulus, apparently one acting on the retina or pigmented part of the eye. In connexion with this, patterns have been reproduced experimentally on the skin of flat fish through the eye, for when such outlined patterns were exhibited to blind fish the patterns on their skin did not occur. This has led me to suggest that the excessive freckling of the skin observed in some people when exposed to sunlight, especially during the summer holidays at the sea-side with its well-known glare, may be due to such a stimulation of the retina, and that wearing coloured (deep red) goggles might act in the way of prevention. But I admit this would be considered worse than the freckles by the majority, of the women especially. Freckles not only occur on the face in this way, but may be observed on the protected and covered parts of the body.

Cutting off the chemical or actinic rays of the sun has been put forward as a means of avoiding the bad pitting of small-pox pustules by filtering the rays through red glass. In some parts of southern Europe, and in Japan, red hangings about small-pox patients are still employed. Our own John of Gaddesden, a physician of the thirteenth to fourteenth century, and who is mentioned in Chaucer's 'Canterbury Tales,' maintained that he had cured the king's son by employing red hangings and wrappings about the bed when the prince was suffering from the small-pox.

There is no doubt that prolonged exposure to the sun's rays, as in tropical and subtropical countries, does in time in some individuals lead to changes in the skin of the exposed parts, that is of the face and the backs of the hands. Such changes may go on slowly for a considerable time without leading to any serious trouble, but eventually changes occur which may become malignant and necessitate radical treatment, for ointments and so forth are no use then. It is advisable rather to consider prevention and individuals would be wise to protect the hands and face in the early stages. This is a counsel of perfection, for sea-farers are prone to these changes which have indeed been labelled 'sailor's skin.' Though the conditions of life at sea in this age of steamers are not what they used to be, mariners continue to be greatly exposed to sun, wind and weather. In a general way, a certain amount of sunlight is good for the skin, for its nutrition is stimulated thereby. Those who work underground are at a disadvantage in this respect. Children deprived of sunlight are also apt to suffer in various ways, and this may be observed in youngsters living in Artisans' Dwellings or Peabody Buildings, from their originator in England. In them the children living on the upper floors, in congested districts where there is no attached playground, are kept indoors a great deal. But too frequently, such buildings degenerate into vertical slums, which are worse than the horizontal ones in some respects, for at least the latter have some curtilage.

In this place it is germane to the subject to allude to the changes which occur in the skin of the hands of X-ray workers, for in certain ways ' sailor's skin ' is an allied condition. In the early days of the X-rays, those who used them constantly in a routine manner did not protect their hands as they do now. Unfortunately a number of these operators developed skin troubles, which ended in serious complications and amputations, and in some cases death, as is well known to those who read the papers. Though the X-rays pass through the skin, some of their constituents may affect the skin injuriously and produce inflammatory reaction, scars, pigmentation and so forth. But now that more is known about these rays, various precautions are taken in the technique of their application for purposes of treatment, complications are reduced to a minimum and but seldom occur, especially if one considers their very general use.

Again the skin may exhibit birth-marks, port-wine stains, hairy moles, varying in size. Such are frequently attributed to maternal impressions, but there are no real grounds for such a belief. However in this, as in many other popular beliefs, those who hold them will hold them still. It is no good arguing about these opinions, and people must believe what they like. Some hairy moles are very extensive, and may occupy what has been called in their case the bathing-drawers' area, extending from the lower part of body down to the upper part of the thighs.

It would be impossible in this place to go into the numerous details of the skin changes and diseases which come under observation. But sufficient has been said to give an idea of the multiformity of the appearances which may occur, a fact which makes the study of skin diseases so difficult.

Just as the skin and its constituents present variations from individual to individual and from race to race, so do these structures differ in one and the same person if we consider them in the various parts of the body, from head to foot.

CHAPTER IV

TOPOGRAPHICAL VARIATIONS

IF we begin with the head, the skin there or scalp as it is called is thicker than that of the body and neck. It is modified in structure and is covered with hair. In the infant the hair is very fine and downy. Gradually it becomes thicker and longer. When baldness in later life supervenes, the scalp becomes polished and thin, showing frequently the boundary lines of the bones of the underlying skull.

'Time himself is bald, and therefore, to the world's end, will have bald followers' (Comedy of Errors).

Owing to his baldness, Cæsar was nick-named Calvus, and was allowed to wear the laurel wreath in the Senate to disguise the fact as much as possible. The scalp is very much more vascular than the skin in other parts, and its good blood supply is favourable to the healing of clean cut wounds when their edges are brought together. The superficial layers of the scalp are fixed to the underlying parts by fibrous structures, and this is the case too as regards the skin of the palms and soles.

The distinction of the scalp is the hair. But a discussion of this must be left to a later opportunity

when the hair will be dealt with in a more special manner.

Though the scalp is the most noticeable hairy part, it must not be forgotten that the body surface generally is more or less hairy, only the hair is present in the shape of a very downy and ill-developed growth usually, except in the armpits and other situations.

Among the North American Indians, an enemy's scalp was symbolic of victory. The great Sir Richard Burton shaved his scalp completely when travelling in the western parts of North America in order to escape this indignity in case he fell into their hands.

The skin of the face too has characteristics which must delay us a moment. The skin of the eyelids is thin and lax, and inflammatory swellings readily occur which in eczema and nettle-rash may close up the eyes. The bagginess of the lower lids is significant in certain morbid conditions ; and at the outer angles, the fleeting of time shows itself in the shape of crows' feet, in addition to the greying of the hair at the temples (from *tempus*, time). The furrows of the forehead and about the eyes are related to the emotions, to thinking, frowning, or as a result of some abnormal states of vision and anger, but also to laughter and smiling, ' He wreathed his face in smiles,' said a poet. Be it remembered that the smile is in origin a modified snarl. Excessive wrinkling of the face occurs as a result of emaciation in some diseases, giving the features the appearance

of premature old age. This may also be observed in new-born infants at times and is due to infectious blood-conditions.

The eyebrows and eyelashes vary in many ways. The former may be excessive and bristly, or scanty; dark or fair, according to race and nationality. In albinos and red-haired individuals they are usually scanty. The eyebrows may join up together across the root of the nose instead of being separated. This is considered a sign of beauty in women in the East and among the Moors, and when it does not exist, art supplies the deficiency. Says Richard Burton in his translation of 'The Arabian Nights': 'A great beauty in Arabia and the reverse in Denmark and Slav-land, where it is a sign of being a were-wolf or vampire. In Greece also it denotes a *Brukolak* or vampire.' The pencilled eyebrow is the most beautiful and the rarest. Raphael was very fond of depicting this in his Madonnas. The skin over the eyebrows is thick owing to muscular attachments.

The eyelashes may be very long and curved. In fair individuals of the delicate refined type, the 'non Angli, sed Angeli' of old Pope Gregory referring to young English captives, the length of the eyelashes taken with other appearances may be indicative of a tendency to tuberculosis. The red-haired are prone to this infection. The beautiful tints of naturally red-hair in women go usually with a milky-white skin. But such individuals are prone to freckling as a result of exposure to sun.

When the eyelashes and eyebrows fall out as in

some diseased conditions, their absence gives a staring look to the face. Here the eyebrows must be ' pencilled ' artificially.

The skin of the ears is tightly fixed to the underlying gristly structure, so that inflammatory swellings in this region are particularly painful. Hairs occur in the outer channel and about the ears generally, very much so in some people.

The sides of the face, the upper lip and chin area are hairy in the male. This is a secondary sexual character. The amount varies, but all are not ' bearded like the pard ' and like Esau. Hairiness is usually taken as a sign of strength, but this is not strictly so. Samson's strength lay in his hair, which when sheared by Delilah delivered him into the hands of the Philistines. This may be a solar myth and representative of the moon subjugating the flowing rays of the sun. But hairiness of the face may occur in women, race and nationality here playing their part, Southern and Eastern dark individuals usually being the sufferers. There is a relation between female superfluous hairs of the face and the genital functions, when the latter are in abeyance, or at the change of life. The latter is a critical period in more ways than one, and from the point of view of looks this hairy growth on the face becomes a disability, which sometimes reacts very depressingly on a woman's natural disposition. This may lead to isolation and introspection, a vicious circle being started, ending sometimes in melancholia. In the section dealing with the cosmetics of the skin this will be

touched upon in more detail. Again in some women, hairiness of the beard and moustache regions may be a secondary character of the other sex, hence viragoes and mannish women. With age, an alternation of this sexual character is not infrequently observed, old men becoming hairless and looking like old women, hence the origin perhaps of the term 'old-woman' applied to some men, though the gibe is often a libel on the 'gentler sex.' On the other hand, some old women, I mean of the female sex, become hairy about the face and approximate in appearance to the so-called 'stronger sex.'

The skin of the face may be dry and thin, cracking easily and reacting readily in an inflammatory manner without much provocation to cold winds and strong sunlight. As to the latter, in addition to the light rays, the sun emits chemical ultra violet (actinic) rays, to which the exposed parts, such as the face and hands, are in some subjects very sensitive. The rays reflected from snow and ice, as in the Alps and Polar regions, or from the surface of the sea, as in the Tropics, especially when a sailing ship is in the doldrums, affect tender skins. In Alpine climbers, that the solar rays may lead in this way to blistering of the skin of the face and neck is well known; and at times this blistering may be very severe. In the expedition to Mount Whitney in the United States, the members found that the cooler it grew the more the sun burnt the skin, so much so that the face and hands of some of the climbers looked as if they had been seared with hot irons.

(The peaks were of grey granite and no doubt reflected the rays very forcibly.) Browns, reds and violets are the colours for veils and sunshades as far as the protection from the sun is concerned, for they absorb the chemical rays. The counsel of perfection would be a burnt umber paint. In the coloured races, the pigment of the skin is a protection. And in white people, the tanning and darkening of the skin as a result of exposure is due to the formation and increase of pigmented protective cells. Those who suffer from permanent white patches of the skin find that the white areas do not take on sunburn, for in the skin of those parts the pigment-cells have been driven out. As a consequence of this the white areas may and do become inflamed and painful owing to the action of the chemical rays.

On the other hand, the skin of the face may be coarse and greasy. This is the case in Acne vulgaris, when in addition one finds what are called 'blackheads.' This is very disfiguring, not only on account of the pimples and pustules, but in bad cases matter may form more deeply in the true skin, and if not attended to may lead to permanent pock-like scars. This may also occur on the back and front of the chest. The disease commences at puberty and is related to the changes taking place in the sexual apparatus, that is somewhere about fourteen or so, more or less. Sometimes parents are told the affected child will grow out of it, so no attention is given to the case and the disease is allowed to have its own way, leading at times to an ugly pitted aspect

of the face, and also of the body when that is affected too, very detrimental to the individual's looks later on in life, especially if a girl. A great deal can be done for this condition in the way of treatment. But as in the treatment of any disease 'flesh is heir to,' every case must be dealt with on its own merits, both from the internal and external points of view. As to the former, it should be mentioned here that there are many patent blood-purifying mixtures on the market and these may aggravate the pimples and pustules, and lead in some cases to severe skin eruptions. The same may be said of patent remedies for fits.

Another form of Acne, viz. Acne rosacea, affects adults. This is primarily internal in origin and only secondarily exhibiting itself as pimples and pustules about the central parts of the face. The uncharitable often attribute this condition to drink, but this is not the case in the majority of instances. There are various forms of indigestion, which give rise to it, with other factors. But as the Chinese proverb says: 'A man with a red nose may be an abstainer, but nobody will believe him,' which shows how ancient is the unkindness of one brother to another in our poor humanity.

The face again is a common seat of Lupus vulgaris, true Lupus, a condition which is extremely rare among the well-to-do. That is perhaps the reason why so little is done in the way of suitable homes for those who suffer from this complaint, and who are usually not received with open arms in convalescent

institutions, owing to the great disfigurement and unpleasant aspect of some of the victims. Though X-rays, light treatment, and so forth help these cases, the necessity of good food, fresh air and hygienic surroundings generally are usually lost sight of. It is in this disease that it is of the utmost importance to oppose the beginning. Were this always done, the very bad cases would gradually become non-existent among us. Long periods of opportunity are frequently wasted by applying all sorts of ointments and local remedies, which have no effect whatever on the growth, for it is a growth in the skin, and not a mere inflammation. I have seen a young woman, for instance, much disfigured, half her face being affected, as a result of a Lupus vulgaris which commenced as quite a small thing in the centre of one cheek. Had that been destroyed in the early stages, an insignificant scar would have resulted. There is another form of skin disease of the face, though other parts may be affected too, totally different, but which has unfortunately been called Lupus erythematosus. It is not the same disease at all as Lupus vulgaris, which has been just described. The face in this Lupus erythematosus is affected in a different way. This is only mentioned in passing, as the name Lupus is one that naturally frightens people, who do not know the differences between the two morbid conditions.

In some parts of the East and North Africa, as Bagdad and Biskra, there is an obstinate skin affec-

tion of the face usually, which goes by the name of Bagdad boil, *bouton de* Biskra, and so forth. In Biskra, I saw a young Italian boy with several of these crusted sores about the face, which he did not trouble about or seem to mind. In Morier's delightful 'Adventures of Hadji Baba of Ispahan,' the hero says: 'I was attacked by a disorder, from which few residents, as well as strangers at Bagdad are exempt, which terminating by a large pimple, as it dries up, leaves an indelible mark in the skin. To my great mortification it broke out upon the middle of my right cheek, immediately on the confines of the beard and there left its baleful print, destroying some of the most favourite of my hairs.' It is well to bear this in mind when travelling in parts where the disease is prevalent. In the East there is a sacredness about the hair; they swear by the Prophet's beard. In that brilliant masterpiece 'The Shaving of Shagpat' by Meredith, the single hair of the head, the 'identical,' is the hero of the story.

The skin of the nose is more and more firmly fixed to the underlying gristly scaffolding the nearer it gets to the tip and the sides of the nostrils. The nose and the surrounding areas are very liable to black heads and acne in those with greasy skins to say nothing of those bugbears, shininess and redness, which require the frequent services of the friendly powder puff in the vanity bag. In some individuals the end of the nose is sprinkled with stiff bristly hairs. The nose again, as in Bardolph and in 'antient' Pistol may be exuberantly deformed

through the enlargement of the sebaceous or fatty glands.

> 'Thou bearest the lanthorn in the poop, but it is in the nose of thee.'

This deformity, the bulbous nose, may arise apart from drink, though indulgence in liquor is often a factor, but indigestion and exposure to all weathers as in the case of the old 'bus drivers also play a part. Gillray has a good caricature of a grog-drinking Briton of the period (1801) undergoing the Quack Perkins's metallic tractors' treatment for such a condition, and the patient looks far from happy as the sparks fly out of his nose. Snuff-taking has gone out of fashion, but in the hardened that habit did not improve the appearance of the nose and nostrils. Pope Innocent XII. issued a ban against all snuff-takers, but this was later repealed by Benedict, who took rappee himself.

The skin of the lips is connected with muscular tissue. The border of the upper lip usually projects a little beyond that of the lower one, markedly so in the scrofulous, except in some races with very thick lower lips. In the Hapsburgs, the lower lip projects in a very characteristic manner. In France, this was alluded to as the 'lèvre autrichienne' in the case of Anne of Austria, the consort of Louis XIII. This lip is said to have been brought into the Hapsburg family by marriage through a Polish princess, a strong woman who could drive a nail into a wall with her fist. Julian the Apostate judging from

portraits on coins had a prominent under lip of the same kind. This deformity is often associated with a prominent chin. The hairiness of the upper lip and chin has already been referred to, as also its unsightliness when it occurs in women, though a young lady once said that she did not agree with her mother about it, as 'she rather liked her little moustache.'

In painful illnesses and depressive states of mind, the folds running down from the sides of the nose to the outer angles of the mouth may become very accentuated and give a down-at-the-mouth look. Sometimes the crescent-shaped line at the boundary of the lower lip with the chin is very sharply defined. At the tip of the chin a well-marked dimple occurs in the middle line in some individuals. A weak masculine chin can be concealed by allowing the hair to grow there, and it is done. Paraphrasing Ben Jonson's 'Speak that I may know thee,' one might say 'Shave that I may see thee.'

The actual hue of the red parts of the lips is affected in a variety of ways, as in anæmia, heart-disease, spirit-drinkers; good lips and a well developed chin usually go with good teeth and a good digestion. The lips are well provided with nerves, blood-vessels and glands. They are frequently the seat of eruptions and swellings. Promiscuous kissing, a silly habit by the way, should be especially avoided in such conditions, both actively and passively, as at times serious accidental infections have resulted. Cracked lips should always be attended to, as infections may

find their way into the body by them. When we get to the neck, we find the skin in front is thin and can be readily pinched up as compared with the back of the neck where the skin is tougher. Attached to the lax skin in the front of the neck there is the *Platysma* muscle, which is still fairly developed in the muscular type of man, but it is no longer the powerful muscle of some of the other animals. In the horse and cow for instance, this muscle is put in action to shake off plaguey flies. In the front of the neck there is exceptionally a single slight transverse line of indentation, which the French call 'le collier de Vénus.' In fat babies and cherubs, the folds about this part are very marked and require special attention, especially in inflammatory conditions of the skin. The Rossetti type of neck is due to an enlarged underlying thyroid gland.

The skin of the neck generally is frequently affected by rashes at the same time as the face. And in blushing, the neck and the upper part of the bust show the reddening of the skin especially in some delicate skinned and fair women. The back of the neck is a favourite seat of pustules, boils and carbuncles. Again, the neck in some conditions shows a darkening with pale areas in certain conditions. In pregnancy sometimes, especially in brunettes, the skin of the face may exhibit large brownish yellow or café-au-lait patches, 'le masque de la grossesse.' In this connexion the striæ or scar-like mottling of the skin about the abdomen may be

alluded to, as they result from the great distension of these parts, which leads to rupture of the elastic cutaneous fibres. Such lines are also observed about the thighs, etc., in people who have been very fat and become thinner.

The skin about the middle of the chest is more or less hairy, in men, in some individuals of the dark type very much so ; it is not necessarily a sign of strength. Some women occasionally exhibit a certain amount of hairiness between the breasts, and at times about the nipples themselves. In this region pimples and pustules and scaly patches are not infrequent.

The skin of the breasts themselves is thin and delicate, the veins showing through. Owing to this, the maternal breasts expand when filled with milk. In pregnancy, a darkening of the skin takes place about the nipples, especially in dark women. In this area too a growth of hair may occur.

When the skin is punctured with a blunt but pointed instrument, it splits in certain lines called lines of cleavage, reminiscent of the way the body has been built up in segments.

On the back the skin is thicker than on the front of the body, and the upper parts are frequently the seat of acne, which unless dealt with early may become very disfiguring, owing to the pitted scars often left behind. At the lower part of the spine a tuft of hair is sometimes observed, reminiscent of what is seen in the statues of fauns. This hairy

growth may indicate an abnormal condition of the bones beneath.

The eruption called shingles mostly attacks the skin of the body on one side. There is a popular notion that if shingles go round the body, that is form a complete circle, the patient dies. Though I have seen a number of cases, I have never observed such a circle ; sufferers have no need to worry about such an event. The word, a curious one, comes in my opinion from *cingulum*, a girdle.

Looking at the body generally, it must be noted that the skin is thin at the bends of the elbows and the back of knees, the armpits, the groins, and between the fingers and toes, as compared with the other parts. In the palms, the skin is very thickened in those who work at hard manual labour, hence the horny-handed, without whom by the way a good deal of the most unpleasant work would go undone. In those races that go about bare-footed, the soles of the feet become thick and horny too. Both palms and soles are provided with plenty of sweat-glands, as those who perspire too freely in those areas know to their inconvenience, and sometimes misery, though treatment can achieve much in the way of relief. As regards the feet, and it may here be added the armpits too, the sweat may become very offensive and lead to hypochondriasis and morbid self-consciousness.

The hairy parts of the body also harbour animal parasites. This is the reason that among some races these parts are shaved. We shall have occasion to

return to this point, when dealing with the subject later on. The schoolboy who defined a Parasite as ' a kind of umbrella ' was inaccurate.

After this general survey, we are now able to pass on more particularly to the Hygiene of the Skin.

CHAPTER V

GENERAL HYGIENE AND BATHS

IN the first place we must consider ordinary cleanliness and the subject of baths. Though in the matter of cleanliness of the body generally great strides have been made in modern times, a great deal more requires to be done to bring things up to the perfect standard. It is frequently stated that cleanliness is next to Godliness. The fact is that Godliness should be considered impossible without cleanliness. If the latter is looked after, the former will probably take care of itself. In pagan times connected with our own history as a race to go no further back, it is well known that baths played an enormous part in the daily life of the ruling classes of ancient Greece and Rome, for it must be admitted that the proletarians and the slaves of those times were perhaps left to get on as to washing as best they could. But they were not altogether neglected apparently among the Romans. Wherever the Romans went, there they established baths and provided an ample water supply. The beautiful Roman bath at Bath is an instance, and their wonderful aqueducts are well known, among them the remains of the one which brought water to old

Carthage, from sources many miles away across the North African plains, and the wonderful Pont du Gard in France. The baths of Caracalla in Rome, the ruins of which are one of the sights there, must have been very magnificent. They occupied a space of some 700 ft. by about 400.

Among the earlier Greeks, frequent bathing was considered a mark of effeminacy, but later baths came much into vogue and were attached to the gymnasia. In Sparta, it was the fashion to start the perspiration with hot dry air and follow this up with a cold bath. In ancient Rome, the custom was to have a bath every week in a place called the wash-house near the kitchen. At a later period, public baths became very general and were opened from two in the afternoon to sunset. Very small charges were made; less than a farthing for men and a little more for women. Children were admitted free. In the time of the emperors, the baths of Rome became very luxurious. We have alluded to those of Caracalla, but we may mention here the baths of the wonderful Villa of Hadrian near Tivoli. No provincial town was without its public bath and many villages also had theirs. The remains of a private Roman bath at Caerwent in Monmouthshire give one an idea of the bath-room of a Roman gentleman. In Pompeii again the remains of the public bath are of great interest. The large baths were divided into three parts, first, the *tepidarium* heated with warm air to encourage perspiration after undressing; then the bather took a hot bath

in the *caldarium*, either in a tub (*solium*) or in a larger affair like a small plunge bath or *piscina*; finally a cold bath was taken in the *frigidarium*. The bather was then scraped with a strigil (*strigilis*), as can be seen in the statue of an athlete at the South Kensington Museum, rubbed down and the body anointed with oil. A strigil for scraping the sweaty coat of horses after exertion is a well-known instrument. In their conquering campaigns, the baths of the Romans must have played a great part in civilization; and where they remained the longest as masters and protectors, there their influence is still perceptible. Our City of Bath was *Aquæ solis* or baths of the Sun, and the towns named Aix derived their appellation from *Aquæ*. A quarter of Paris is still termed *les Ternes* from the old Thermæ, for it must be remembered Paris was the seat of government in Gaul during Julian the Apostate's sojourn in France. Just off the Strand in our own London, an old Roman bath can still be seen.

With the coming of Christianity, there is no doubt, among the early and primitive Christians at any rate, that baths lost ground, for the body was not considered of any account, whereas the ancient Greeks worshipped the body for itself, for its form and beauty. In mediæval times, however, baths in cities were much frequented, but they often degenerated into the stews (in French *étuves*) of old London on the Surrey side, as described by the chronicler, John Stowe. The appearance of a severe infectious epidemic disease after the siege of Naples at the

end of the fifteenth century led to their desertion and neglect. Some of these baths were for mixed bathing, so that is nothing new. Poggio, a Florentine of the quatrocento, has described the mixed bathing at Baden, in Switzerland, in an amusing little book. In the cities of Sweden and Russia, baths are much frequented, in the latter the steam or Russian bath being indulged in chiefly. In passing we must also allude to the Moorish and Turkish bath, and the ceremonial ablutions of Mahomedans, that is, where water is obtainable. In the desert, sand has to take its place, or a stone is used symbolically. Again there is the religious bathing of the Hindus in the sacred Ganges. Among the Japanese, bathing is a very prevalent and daily custom, very hot water being used, such as we could not stand. They have regular family tubbing parties. Though the writer's medical experience of the Japanese is limited, he is bound to say there is a pleasant odoriferous scent about their skin, which has led some writers to say that a popular Japanese crowd was not at all unpleasant. On the other hand, the Japanese do not return the compliment, for they complain of the unpleasant odour of the Western barbarians.

In recent times with us, houses with baths are becoming more and more common, but it was not so long ago that quite good houses had no bath-room. In our Australian Colonies houses without baths in cities would not now be tolerated ; and in the United States, baths are general.

As a result of perspiration and variation in the

secretions in the way of fatty materials, the odours of the skin are manifold. Individuals differ from one another in this respect, as do also races. The sense of smell in some primitive people is very acute, as in dogs, and they are able to distinguish one person from another by the nose. Whether the Maori mode of salutation by rubbing noses arises from this I do not know. This olfactory power is in abeyance and degenerated among many in our modern town life, or they could not stand being crowded together in unventilated railway carriages and in trams and 'buses as they do, to say nothing of the awful atmospheric conditions which sometimes obtain in our theatres and concert rooms. These odours emanating from the human skin and clothing, combined with the stillness of the atmosphere, makes it next to impossible after an hour or so to enjoy either plays or music. The body-smells in a crowded railway carriage are not pleasant, especially when the windows are hermetically closed, a circumstance which not only obtains on the Continent, but which can be observed any morning in first-class compartments full of men going up to the city in our suburban trains. Juvenal the satirist long ago referred to the rancid cutaneous odour of certain women of the suburb of Rome called Suburra, though the smell is more like that of a stale bread-poultice. Others again object very much to primitive negroes on this account. In our modern communities, however, washing and baths have levelled people up a good deal, though much more requires

to be done. Some individuals, women especially, are so sensitive on this point, that it becomes an obsession. Marcus Aurelius, the philosopher emperor, was very sensitive about cutaneous odours. There is the case on record of a woman who could tell whether her sheets had been touched by anyone beside herself, so keen was her sense of smell. Haller, the great physiologist, could not bear the smell exhaled by old people's skin. It is still believed by some that acid changes in the skin at the time of the period can turn milk. I knew a medical man of the old school, who was quite sure this was a fact and was very fidgety about it in consequence. When the fatty secretion of the skin is excessive, the smell may become marked and one writer compared it with that observed in the neighbourhood of candle factories. The skin of infants at the breast gives forth a sour odour. As to those who are bottle fed, the aroma is more reminiscent of rancid butter. After weaning, the odour of the skin improves. The 'goaty' smell of some men is a frequent source of complaint. In the aged, the smell of the skin has been likened to that of decayed leaves. The Eskimos and Greenlanders as a result of their diet of fish and oil, together with their mode of life, are not very savoury in this respect. The odour of the skin may be influenced in affections of the nervous system. Thus a hypochondriac smelt of violets and a hysterical woman of pine-apples. In another case, the odour developed was like iris. In the middle ages, witches were supposed to have a sul-

phury smell and this was a sign of Satanic possession. Saints on the other hand were said to give forth the odour of the rose, the lily, jasmine and so forth, a veritable odour of sanctity, all of which can be read at large in their lives. Saints too could smell out sinners. A great deal has been written as to the cutaneous scents developed in the course of lunacy. As to catalepsy, it has been asserted that the skin has a cadaveric odour in the trance condition, and that this has been a factor in supposing the individual to be really dead, when such was not the case.

In certain clefts and folds, the accumulation of fatty secretions gives rise to fermentations which have a specially unpleasant rancid and fishy odour.

Another aspect of the matter is the smell communicated to the skin by certain condiments and drugs taken by the mouth and modified by the functional activities and condition of the individual integument, such as garlic, spirituous liquors, valerian, phosphorus, sulphur, cod-liver oil and so forth. In acute alcoholism, observers have noted an ethereal odour of the skin which they consider helps to differentiate the comatose condition of the dead-drunk from that due to apoplexy. It is often possible to diagnose the trade and occupation of individuals by the nose alone. The smell of the stable is well known and it hangs about the person in a very obstinate manner. I have also specially noticed the smell of saw-dust in carpenters, of fried-

fish in fried-fish-shopkeepers, etc., without asking any questions as to occupation. In a disease of the scalp due to a fungus, i.e. favus, there is a more or less mousy smell in some cases. The cock-chafery odour of tramps has been described by Continental writers. Vidocq, the famous detective, in his 'Memoirs' says that in a crowd, he could spot a galley-convict out of a thousand people by the nose alone. It would take us too far to enter into further details as to the smell of the sweat in a number of diseases, but many are familiar with the sour odour observed in acute rheumatism, in which sweating is a prominent symptom.

In order to cover unpleasant skin emanations, all kinds of strong scents have been used for ages past. Sometimes the combination of the added scent and the odour of the skin make matters worse confounded. It is not difficult to distinguish the over-scented from those who use scent in a legitimate and æsthetic way. Treatment in many cases can do a great deal to remedy defects of this kind, though sufferers are naturally shy of seeking advice. Moreover, some of these unfortunate individuals are not themselves cognisant of their unpleasantness to others. Obviously in such cases, extra cleanliness is indicated, but this is not always sufficient. This fact is a source of mental suffering and morbid self-consciousness in individuals afflicted in this way. As to the fetid odour of the feet in some people, a special microbe has been described as occurring in the sweat of these parts. Unfortunately a disability

of this kind is often allowed to go on unchecked, instead of being dealt with.

Although we have made great strides, yet when we consider the absence of baths in factories and at the pit-head, we have much leeway to make up. Especially where the work is dirty or in any way offensive, baths should be provided as a *sine qua non*. The counsel of perfection would be for factory-workers, male and female, in such industries to don a working dress on arrival and when the work was over have a bath and put on their clean clothes again, leaving their soiled working ones behind. But there should be no compulsion about it, or it would become odious. Persuasion and example would suffice. What is done willingly is done with pleasure. If a man preferred to do his own tubbing at home in his own tub he should not be interfered with. Just consider the offensiveness of dirty-soiled clothes and smelly sweaty bodies in our over-crowded strap-hanging tubes, trams, trains and 'buses at the end of the day. It is really disgusting, but that is what goes by the name of Progress, with a big P. 'Progression' if you will, but not Progress, whatever that means and whither tending. I know perfectly well that baths are put to strange uses: to store the coals, grow mustard and cress and even to keep ducks in, it has been said. In one instance a nurse, being called to a house to attend a sick person, asked the landlady if there was a bath in the house and was told that there was, 'but thank the Lord we have never had to use it,' she added. Rome was

not built in a day, and time will work wonders. Marat of revolutionary fame certainly believed in baths, for did not Charlotte Corday find him tubbing when she called on urgent business. It must be noted that Marat had studied medicine and had lived in England. Indeed one of his short treatises was written in English.

Though there are apparently apostles of 'how to be happy and healthy without washing,' it is on the whole advisable to keep one's skin clean. Most native races take to water, except the hairy Ainus of Japan apparently, for I have read somewhere that these people were quite surprised at the bathing and washing propensities of a European traveller among them. They thought he must be very dirty to indulge in such practices.

Those who are able to take a morning cold tub have a great advantage. It is both good for the skin and for the general health, owing to the tonifying action. But those who have not a good circulation and reaction, and this is the case with many women, should take the chill off first, by the addition of warm water. Cold sponging or a cold douche or plunge after a warm bath is extremely good for bracing up the skin, that is in those who can stand it. This was well known to the Romans as we have shown.

As to warm baths, they should not be taken too hot, nor should they be frequent and prolonged as this relaxes the tissues. Soap is essential to remove the products of the fatty and sweat glands. But it is not necessary to use strong soaps. Exceptionally,

some skins cannot stand soap of any kind. Then a handful of bicarbonate of soda to a full bath, or bran, or oatmeal can be used. Medicated soaps are really not necessary, and their effects on the skin are overrated. The folds and clefts of the body and the armpits should be especially attended to, and this applies to hairy parts except the scalp. It is not good to be constantly and daily douching the hair of the head with water, though it is a common practice.

In those with a tendency to dry skin, mild curd and Castille soaps are useful. But they must be of good quality and not overdone. A fatty preparation may be required in some cases where the skin is exceedingly dry. In all cases, after carefully drying, a good toilet powder should be applied to the folds of the body, and this is to be recommended. Individuals vary so much as to washing and baths that no rule can be laid down as to their frequency, so much depending too on the kind of skin, the occupation, age and other factors.

Warm baths are beneficial at night as they frequently exert a sedative effect and lead to sleep, a point of importance, for the skin is, as I have shown, intimately connected with the nervous system and other functions of the body. Sleep is beneficial to the skin; hence no doubt the old saying as to 'beauty sleep before midnight.' After a fatiguing day, especially as a result of physical exertion, a warm bath is much better than a cold one, for the former soothes the body surface and tired nerves for the same reason. Insomnia, wakefulness, dis-

turbed nights, make all the difference to the skin, for in these conditions the skin of the face especially is not relaxed into that placidity of the features which one observes in those who are sleeping quietly and healthily. The passions and emotions, and the mode of life as to eating and drinking, all reflect themselves on the surface, and influence the skin in a variety of ways.

Cleansing the face at night should be the rule in order to get rid of the perspiration and dust of the day, especially in our cities, and allow the pores to take on a healthy state, instead of being clogged with fermenting materials. As a rule the face in the delicate skinned, women chiefly, cannot stand much or any soap, but the parts must not be neglected on that account. Glycerine and rose water are sometimes useful here. Some skins again derive benefit from the application of weak alcoholic solutions. In other individuals again, rubbing in a pure good simple face cream is beneficial, but as to such applications being skin-foods, that is all nonsense. Antiseptic baths and strong lotions are not necessary, indeed may be harmful in ordinary healthy skins. It is another matter in diseased states, with which we are not concerned here. Nor can we go into details of the various waters of a number of health resorts, which are sometimes useful as baths when properly employed. In some places, the hard water irritates the skin and should not be used in the sensitive. Whenever possible, rain water is the best. This is readily obtainable in the country, but in our

smoky cities this source of supply is not available, so we have to fall back on water that has been boiled and allowed to stand, or distilled water, or water that has been softened. Rain water can be passed through muslin to get rid of smuts and cleared to some extent in that way. Exposing the face to soft warm rain is not only pleasant, but beneficial.

Fresh milk may also be used, applied on cotton wool. Milk baths have been employed by the fastidious and unoccupied of the gentle sex. The Empress Poppæa Sabina, wife of Nero, travelled about with a number of she-asses in her retinue in order to indulge in baths of this kind. Effervescent champagne baths have also been used we are told, but I have never known of an authentic case. Aberrations of all kinds are found in our humanity and this has probably been one of them. Gaseous carbonic acid baths, however, are very refreshing to the skin. Sulphur baths in the form of Potassa sulfurata are sometimes ordered for parasitic skin troubles, but they blacken and spoil utterly metallic or enamelled baths. Sulphur itself is not soluble in water.

A good and pleasant thing for the skin is gentle massage under warm water sprinkled over the bather, as in the Vichy douche-massage, followed by a cold plunge and a rest tucked up in blankets on a couch. Here again the intimate connexion between the nervous system generally and the skin is well exemplified by the excellent general sedative result

obtained. Sea-water baths are good in those with a good circulation and healthy skins, but in some individuals and when the skin is inflamed they are harmful. In some cases, it is as well to clean off the sea-water by means of warm fresh water as is done at French sea-side places.

Exposure to strong wind and sunlight is not good for the complexion in the case of women as a rule. They cannot have it both ways, and if a good complexion is desired then they must take care of it. It depends on the point of view. Some women take extraordinary care of their skin, especially of the face, whilst others pay no attention to it. That is a personal affair and individuals will please themselves in this respect.

As to the hands, they need attention, if the individual desires to have them in good condition. They should not be washed too frequently, and be protected by gloves. But in some occupations, frequent washing is a necessity. Then it is best not to use strong soaps, unless the hands are hardened and horny or dirty and soiled, as in certain trades.

The feet, especially between the toes, require great attention, though this is a part of the body which is but too frequently neglected. When this is the case, offensive odours are apt to develop, as a result of fermentations. What we have said of the feet applies to various folds, interstices, and clefts, which require regular and proper ablution.

With regard to the new-born, they must be care-

fully looked after as to the cleanliness of the skin. The child is born with a fatty varnish (*vernix caseosa*) over the body, which gradually peels off leaving the skin red and tender beneath for a short time. The conditions outside the body are very different to those within the womb. Tepid water, and not hot, should be employed to avoid scalding the infant. If the natural varnish does not come off readily, this should be removed with a little cold cream and rough friction avoided. Later on, strong soaps should not be used, for the skin of young children is very different in sensitiveness to applications and in texture to that of grown-ups. Nowadays one not infrequently finds that strong alkaline soaps, such as are used for washing clothes, are being used inappropriately for them.

Fuller's earth for infants cannot be recommended, though in general use. Good plain simple toilet powders are better. It is on record that some children were made ill from the use of a violet powder which was found to contain thirty-eight per cent. of arsenious acid (arsenic). A new-born infant was dusted with the powder twice on the first day, and again on the second day. As the skin became very red the powder was more freely used, but as the redness got worse starch powder was substituted. But the infant died on the tenth day from exhaustion caused by sloughing of the skin. Great care should be taken as to changing the napkins, for if soiled and allowed to remain on they irritate the tender skin of the folds very much and make the child miserable.

It is important to bear in mind that poisoning may occur in infants and children by applications of strong carbolic solutions. Carbolic acid preparations applied to the skin of small degenerate dogs has led to their death.

CHAPTER VI

CLOTHING

THE new-born, after the skin has peeled off its varnish, perspire freely. It is important to bear this in mind in the matter of clothing. Many infants are often wrapped up in so many garments, that the process of undressing is like taking the layers off an onion or unrolling an Egyptian mummy. Remember the infant can only show its discomfort by crying and restlessness; a state of affairs due it may be to too many coverings or to their tightness or to ordinary pins sticking in them, when it is not due to thirst. Infants often require plain water to assuage their thirst and keep the skin function going, but in many instances in answer to their automatic vocal entreaties they only get a beastly bit of rubber, at times not overclean, to suck. 'I asked for water and thou gavest me vulcanite.'

The question of clothing too in adults is an important matter from the point of hygiene, especially as regards the materials worn next to the skin. Thick flannel and woollen under garments often lead to excessive sweating and irritation. It is wonderful to behold sometimes what dreadfully thick and hot things are worn in this way, from

neck to ankle, especially woollen materials. Sheep are woolly creatures, but that does not prevent them having all sorts of complaints. Cotton and linen materials are much more grateful to the skin, and healthier. At first the Romans wore wool generally. The women among them were the first to exchange wool for linen and very sensible too. Later the men adopted linen; it was a luxury. Warmth can be obtained by mixing in silk, for silk is a bad conductor of heat. Flannelette should never be used, owing to its inflammability. This is, or should be well known, yet year by year the deaths of children are recorded as a result of burns. Extensive burns of the skin are frequently fatal owing to the severe shock to the nervous system for the reasons we have mentioned when dealing with the structure and development of the skin and its intimate connexion with the nervous system. The skin can be trained from childhood by suitable clothing, with due attention to the seasons and without overdoing the Spartan business. One point to bear in mind is that infants should not be rolled up like mummies, but the active skin given some freedom and ventilation.

As to clothing and underclothing, men, chiefly in some classes in this country suffer from too many thick garments, which must take much of the energy out of them, especially in hot weather. There is a correlation between the amount of clothes and the mental and social outlook. The upper and cultivated classes are more lightly and sensibly clad

usually than their brethren not so high up in the scale or not so fortunate. Linen 'shorts' and thin underwear generally are usual among the former. Light linen and zephyr shirts, with or without a vest underneath, the latter for preference, and light weight clothes are coming more and more into vogue for the dog days. In the hot weather, a Roman toga and sandals would be appropriate, but what would happen if men walked about Piccadilly and Bond Street in this way, I do not know. Why again the police on duty in our streets should not have more suitable summer uniforms is another point that strikes one especially when they have to stand in the hot sun controlling the fearsome 'traffic' of our streets at Oxford Circus and elsewhere.

> 'The policeman with uplifted hand,
> Controlling the orchestral Strand.'

The difficulty, however, is our changeable climate. Howbeit, men are usually overclad. Women, on the other hand, are much better off and more sensible in this respect, taking it all round, though in some walks of life they are still overloaded with garment on garment. At the present time, women are shedding one article of clothing after another in a way that alarms many good people. But from the point of view of the functions of the skin it cannot be said to be at all bad. On the contrary. These kaleidoscopic and lightning changes, however, are not commanded by hygienic considerations, but by tyrant fashion. In one of his books, Nietzsche

remarks, referring to clothes, that, however scanty a woman's evening toilette might be, she would not catch cold if she felt she was well dressed. Equanimity of the nervous system no doubt.

The top hat in men is being more and more left on the shelf, though it still holds its own notwithstanding its cumbersomeness. But there is something in the tall hat especially when cocked on one side, as Matthew Arnold remarked of the late Lord Wemyss, that appeals to those in whom the spirit of dandyism has not entirely died out. That it leads to baldness is not supported by evidence. The ordinary boater straw hat, though in great use, is heavy and usually not at all comfortable. It cannot compare with the panama, whether real or imitation, from an all round point of view. Trilby felt hats should be lighter in weight and have no linings, which make the head hot. Men's hats should be ventilated by perforations in the top of tall hats, and at the sides, front and back in the case of bowlers.

As to the headgear of women, hygienic growls will make no difference, and indeed some of the airy structures which seem to have alighted by accident as it were, are not at all bad from our point of view, were it not for the hat-pins. When hat-pins drag on the hair of the head and the hats are heavy and clumsy, there is no doubt that it is bad for the scalp and hair. It must be remembered, that women sometimes live all day in their hats.

Children are much more sensibly dressed as a rule than they used to be. They have now plenty of

freedom for movement and also for the ventilation of the skin.

In the matter of garters, a word is needed. Women should wear suspenders or garter above the knees. When gartering is done below the knees, the circulation in the lower limbs, especially in the erect position, is impeded. This accentuates varicose veins, if it does not directly lead to them, and this is one of the causes in the production of chronic cutaneous inflammations and ulcers of the legs, which are so frequently observed. Elastic garters used in the wrong place are bad enough, but when bits of string and tapes are employed the chances of congestion and inflammation of the skin and the subsequent development of these painful chronic ulcers are much greater.

With regard to stockings and socks, those of brilliant hue due to aniline dyes sometimes lead to inflammatory conditions of the skin. But this is not at all common.

Boots and shoes should be light, unless heavy foot-work is engaged in. As a rule the boots that are worn are much thicker than they need be, as also are the socks. In some individuals, toed-socks appear to add to their comfort. The shape of boots and shoes is a matter of personal taste, though very tight fitting and pointed foot-gear do in many cases lead to corns, and deformities of the toe-joints such as bunions, which are the result of constant pressure. There are very few people with well shaped feet and toes. On the other hand, ' hygienic ' shaped boots

are not æsthetic in appearance, and where hygiene and appearance clash, the former goes to the wall. This is especially the case in women, and whatever the discomfort, the majority will follow the dictates of fashion in the way of shape and heels. As to high heels, all kinds of morbid conditions have been attributed to them, even insanity. There is no doubt, however, that uncomfortable boots, pressing on corns and so forth, do tend to react on the temper. In these days of machinery, the art of making boots to measure is dying out, which Carlyle already felt in his time and fulminated against in his usual way in his 'Sartor Resartus' or the tailor re-tailored. Machine-made boots again are frequently very clumsily made and chafe and worry the skin of the feet. Sandals and light rope-soled shoes suit many people. Quite recently there was a picture of a Parisian lady wearing toed stockings and sandals. Sandals are comfortable enough when worn with the feet bare, but when the latter are covered with socks, they do not answer, for the grip is lost. In tropical and sub-tropical countries, it is not wise to go about bare-footed and bare-legged in a general way. Various skin troubles may be contracted in this manner, to say nothing of serious general infections. The importance of the foot-gear of troops is well known to commanders and military surgeons, and special attention is given to the care of the feet in the army.

Corsets again are of use as a support to the skin and underlying organs, provided they are properly

made and sensibly worn. But here again, notwithstanding the warning words of anatomists, women will follow the fashion. In the words of Kipling:

> 'For the colonel's lady and Judy O'Grady
> Are both the same woman under their skins.'

At the present moment corsets are much better made as to shape than they used to be. Tight lacing is not good for the skin, not only about the waist but for the complexion also, interfering as it does with a proper circulation.

As to gloves, when they are tight and too small, the circulation is interfered with. In the early sixteenth century, gloves were much in vogue for fear of infection.

In connexion with the subject of clothing, it may be stated here that feather beds are not good for the skin and should be taboo.

CHAPTER VII

SOAPS

A GREAT deal has been written about soaps. Judging from the vast number of advertisements that constantly meet the eye this might well be called the 'Soap Age.' Soaps with wonderful names are born day by day. Many of them are no doubt re-christened and are old friends with a new label. Some are designed for washing clothes or scrubbing floors, but they are apt to find their way to the human skin, with unpleasant results at times, in children for instance. A number of medicated soaps are constantly put on the market, but as a rule their therapeutic action is more or less illusory, in many cases at any rate. It is well to beware of the bland names which sometimes cover products that may be irritating. They are apt to be a delusion and a snare. But when people are selling goods, they are not always over-scrupulous. Most of them have never read Ruskin's 'Unto this Last,' and his notion of what ideally a commercial man should be. *Caveat emptor* or 'Let the buyer beware' is as true now as ever it was. Moreover, some soaps are made with inferior materials and a variety of waste products, but they may be put up in an elegant way, and thus

mislead. To cover any deficiencies they are scented, but not usually with essential oils from actual flowers, for that would be expensive. The scents used are mainly synthetic and made from tar products, like so many of our dyes and flavourings.

The origin of soap is no doubt of great antiquity. But as far as our own European history is concerned, the Greeks appear to have obtained their soap from the Gauls. The Greeks had various colonies on the shores of the Mediterranean, the most flourishing being Sicily, Naples, and Marseilles. The last named place has been noted for centuries for its soap. The Greek word for soap, *sápon* (σαπων), is said to be of Celtic (Gaul) or of Northern origin. Pliny, the Latin naturalist, who perished in the eruption of Vesuvius 79 A.D., says that soap (*sapo* of the Romans) was an invention of the Gauls, who made it from goat-fat and lixiviated beech-ashes. He refers to two sorts: soft and hard. The Gauls used it to make their hair fair, he adds, and it was used by the Germanic tribes ' more by the men than the women.' He alludes no doubt to the southern Gauls. From Marseilles, the home of soap in the Western world, its use spread to Greece and the other Greek colonies, and later it came to be employed by the Romans. At Pompeii, which was close to the old Greek colony of Naples, there is a place where soap was made. The remains of the building are between the street of the Narcissi and the street of the Consul. Among the Romans, from what Pliny says, soap appears to have been a thick fluid or emulsion, made by mixing

olive oil with the water used to wash wood-ashes. Marseilles soap and its congeners, Naples and Castille soap, were made in this way. And the fact that it was so made, that is from olive oil and wood-ashes led to its great reputation down the centuries. The great bulk of our soap is now made of animal fats and chemicals. Some of the soaps on the market are manufactured from rancid oils and various refuse fatty materials of animal origin, which may make them irritating to the skin. On the whole, however, soaps are well made, but those made with pure olive oil are still the best. In passing it may be said that soft soaps are made with potash and hard ones with soda. Later the Arabs added lime to soap which rendered it more caustic. From the East, the returning Crusaders brought soap home with them apparently, but rather as a curiosity than a household necessity.

There is a passage in Jeremiah (ii. 22), in which the word soap occurs, according to the translators, pointing to the fact that some kinds of whitewashing avail not. 'For though thou wash thee with nitre, and take thee much sope, yet thine iniquity is marked before me, saith the Lord God.'

Superfatted soaps are those which contain additional fat, that is in excess and beyond the amount combined with the chemical parts in the usual way of manufacture. Their effects are overestimated and the excess fat (uncombined) is apt to become rancid. A bye-product in the making of soap is glycerine, which is not a fat, but an alcohol

(triatomic), a fact not generally known, but it is not recommended as a beverage on that account.

We have already alluded to the necessity of using soap to remove dirt, and fatty and sweat products, from the body, especially from the folds and clefts of the body, where fermentation and decomposition are more apt to occur and lead to irritant inflammatory reactions in the skin.

To clean the skin generally, sponges and so forth are used, but it is important that all such articles should be thoroughly clean themselves. They become soiled and greasy, and when in that condition they do not help the skin. For cold sponging in the morning tub, a sponge not used for soap and warm water should be specially reserved. Loofah friction and the rough towel are beneficial in the way of stimulation of the skin and keeping it up to its work, but smart rubbing in this way does not suit everybody. Rubber sponges are not to be recommended for they get dirty and soiled.

CHAPTER VIII

COSMETICS OF THE SKIN

AS to the cosmetics of the skin, this is an art of great antiquity, which has been practised in the East from time immemorial. Jezebel of old was painted, as were also the women of Babylon. To describe the numerous fashions of Egypt, India, China and Japan would take us too far. But as regards the Western World, conquests and expansions of the Greeks and Romans introduced many of these customs from the Indus and the Nile to say nothing of Asia Minor. All kinds of beautifying lotions, unguents, dyes and scents were used as a matter of course. If we consider the Latin satirical poets alone, we find unending references to the toilet preparations in use among the Roman empresses and patrician women of their day. Ovid indeed wrote a poem on the remedies and applications for beautifying the female face. But for all the shafts of satire directed against the abuse of cosmetics, followed at a later period by the fulminations of divines and moralists, the arts of painting the lily and improving nature have gone on unchecked and triumphant down to the present time. The impulse towards ornamentation and the concealment of

blemishes is so intimately connected with the fundamental sexual instincts, round which humanity revolves, that it is waste of time trying to put an end to it. Learned professors may shake their heads and prove beyond all manner of doubt that such customs are bad, but they will always fail in their endeavours, for women will ever strive to make themselves attractive and make up for deficiencies by a resort to art. And after all, cosmetics have their place in life and may be properly employed with advantage. Powders, lotions and creams, and perfumes too, are necessary in the hygiene of the skin. A good complexion, for instance, cannot be attained without trouble. Everything depends on the point of view of the individual concerned. Thus exposure to strong cold winds or strong sunlight may lead to an irritant and inflammatory condition of the skin of the face. Here lotions and powders are indicated. In bygone days masks were used to shield the face from the sun. They originated apparently in Italy. Shakespeare refers to this mode in ' The Two Gentlemen of Verona ' :

> ' But since she did neglect her looking-glass
> And threw her sun-expelling mask away
> The air hath starv'd the roses in her cheeks.'

And again in ' Troilus and Cressida ' :

> ' My mask to defend my beauty.'

Apart from cleansing the skin and attention to internal derangements, such as indigestion, chronic constipation, inadequate liver and kidney action,

all conditions that react unfavourably on the skin, leading to an unhealthy colour, spots and reddened patches, there is certainly room for local applications. These depend on the texture and condition of the skin, whether dry or greasy, coarse or thin, complexion, colour of the hair, and other factors. Treatment of a preventive kind requires discrimination. Where people go wrong is in using preparations that do not suit their own particular case.

As to rouge, a certain amount applied in moderation and carefully does not do any harm, unless the reds are not well selected as to quality and origin. In that case a permanent unhealthy sallowness ensues, which calls for more and more rouging, a vicious circle being established. Again, some toilet preparations sold for beautifying the skin contain metallic poisons. This occurs even when the preparation is guaranteed to contain no ingredients of that kind. When we consider the number of people who have to make up for the stage, very little trouble results from the application of pigments to the eyebrows, eyelashes and the lips, provided always the products are of good quality and carefully removed *secundum artem*. In the old Greek days, there was no necessity for make up as the actors wore masks, for the words of a tragedy or comedy were of more moment than the facial emotions. Applications for beautifying the skin are mentioned in the Papyrus Ebers, the oldest medical work of Egypt, which dates from about 1500 years before Christ. For the tint of the skin equal parts of honey, bicarbonate of

soda and sea salt are recommended, and alabaster powder added thereto for improving the body. In the days of Nero, the toilet of a Roman patrician lady was a very long and serious business, and as many as two hundred slaves, usually Greek women, were employed to administer to the requirements of an Empress. There was an expert attendant for every part of the toilet, one to apply the powder, another to make up the complexion, white and red; others again to pencil the eyebrows, dress the hair, clean the teeth, attend to the lips, hold the mirrors, and polish the nails.

Patches or 'mouches' were at one time much used. In the seventeenth and eighteenth centuries it was seriously discussed if a woman should wear more than three. These black patches by contrast show up the complexion. They were not only worn as small circular black spots, but were of various shapes: stars, half-moons and more elaborate patterns. Pepys says in his 'Diary': 'My wife seemed very pretty to-day, it being the first time I had given her leave to weare a black patch.' At the French court, they were called *coquine, précieuse, friponne, assassine*, etc.

Massage of the skin as after the Turkish bath or the Aix and Vichy douche, followed if possible by a cold plunge is beneficial. But there is a lot of nonsense talked about the enormous amount of dirt that is got rid of in that way. Massage again is as a rule badly done in Turkish baths. There is really no need for the violence some rubbers employ. Very

gentle massage is often more beneficial than forceful rubbing. In Japan, this is done by the blind, who have lost their sight through small-pox in many cases. In the Sandwich Islands, delicate massage is carried out by the natives, what time they croon soft lullabies. It is called 'lumilumi' there. Massage is really an art, requiring cultivated hands working with a refined brain. The idea that any one can do massage is a fallacy. The art requires training and knowledge. When we come to massage of the face and scalp, we are soon landed over the borderland into the realms of the fantastic. Both procedures are valuable when properly carried out in suitable cases, but when accompanied by the brass band of advertisements which promise the impossible, it is well to ponder. In passing it should be pointed out that the slippers which pass from feet to feet in Turkish baths should be constantly sterilized by dry heat.

In recent times, injecting paraffin under the skin to fill in hollows and remedy malformations, of the bridge of the nose for instance, has been resorted to, but a note of warning is necessary here. The immediate results may appear satisfactory, but dreadful deformities due to deep ulceration about the face have ultimately occurred in a good many recorded instances. In one case that came under my own care in which this paraffin injection had been done on the Continent in the region of the neck some time previously, large glands formed due to infection and the patient went to pieces as a result.

CHAPTER IX

THE HAIR

DRESSING the hair was perhaps the principal part of the toilet, as it is now. On ancient monuments the hair played an important part as in the curled Assyrians. Among the Greek women there was an extraordinary variety of fashion, as displayed on Greek vase paintings, in statues and in the terra-cotta figures of Tanagra. In that huge museum of Naples, the various fashions in hair dressing can be well seen in the statues and busts of Roman women. But it must not be forgotten that many of the Roman Empresses and patricians wore blonde wigs, the hair being imported from Gaul and Britain. Fair, auburn or red hair was preferred. In the frescoes discovered recently in the excavations of the old Minotaurian Palace of Knossos in Crete, the arrangement of the hair was so modern, that a French archæologist exclaimed when he was shown them ' Mais ce sont des parisiennes.' Beautiful ivory, gold, silver and bronze hair-pins were used. Such have been discovered ; together with bronze-combs, pomatum-boxes, mirrors, and so forth, artistically decorated, in the ruins of Pompeii. Dyeing the hair was common too. In the East for

centuries, vegetable dyes such as henna (khenna) and indigo have been employed for tinting in various shades. Henna produces a deep orange or auburn colour. The Persians dye the whole of the hands as far as the wrists with it and also the soles of the feet. The Turks more usually tinge the nails. In North Africa, henna is also rubbed into the finger tips and feet, and with good reason no doubt for it is astringent in its action. Some preparations are sold under the name of henna, which are composed of chemicals; such may be harmful. The much admired Venetian red in the paintings of the old masters was artificial. A recipe for dyeing the hair a fine gold in the time of Leonardo da Vinci was as follows:—Maize juice, decoction of chestnut, saffron, ox bile, ambergris, calcined bears' claws and oil of tortoise. Incidentally I may mention here a preparation for sunburn and pimples of the same period:—Asses' milk mixed with the milk of a red goat, asparagus ends and white lily bulbs. This was to be rubbed into the face whilst the lady recited a short prayer three times in succession. The make-up of Caterina Sforza was made by mixing two and a half ounces of carbonate of lead with an equal quantity of tartrate of potash, and adding five ounces of a compound of corrosive sublimate and silver and some tragacanth and Sari powder. This was then placed in the abdominal cavity of a Pisan pigeon after carefully gutting the bird and cleansing with spring water. The next step was to cook the bird thus stuffed in a saucepan containing water that

had been used to make an infusion of adder. The remedy was applied at bed-time. They evidently had plenty of time on hand in those days and quaint notions. The latest thing is blue, green and scarlet wigs for fancy dress balls, no doubt merely a revival of what has obtained in the past, if we are to believe Ecclesiastes, and that there is nothing new under the sun.

But to return to colouring of the hair, dyes nowadays are chemical. Usually two solutions have to be used to obtain the desired effect. In an ordinary way, these solutions are metallic as to one of them at any rate, the other being a 'mordant' or fixation fluid. More recently owing to the wonders of synthetic chemistry, which can play marvellous variations on the tar series, dyes are frequently of this origin. These, and the others too, may lead to widespread irritant inflammations of the skin of the acute eczema type, with swelling and redness of the scalp, face and orbits. I have seen several instances of these complications. In one the eczema-like trouble was very intense and rapidly spread from the head and face to the finger-tips. The fact is that some of these modern hair-dyes are two-edged swords and dangerous. They may have been used by an individual before without mishap perhaps, but one fine day severe inflammation of the skin results from the application. Peroxide of hydrogen is well known, but its use is frequently much overdone, with the result that it makes the hair brittle, dull in look, and inæsthetic. Tibullus, a Latin poet, in one of

his elegies alludes to the use of the juice of the green shell of the walnut to dye the hair and thus conceal the ravages of time.

Sometimes very inflammable fluids are used for cleaning the head and hair. This has led to serious burns in women terminating fatally, for as already said the shock from burns about the head is extreme. Ordinary motor petrol is sometimes foolishly used in this way and fatal accidents have been recorded. Not only is the petrol itself highly inflammable, but its volatile fumes also, so that a naked light or a match or a lighted cigar or cigarette may ignite it at a distance, with dire results. This happens too through carelessness in handling petrol in garages. Yet I have heard of the children of thoughtless parents being allowed to play with petrol in a bathroom as if it were tap water. Celluloid combs as ornaments for the hair are dangerous for the same reason, for celluloid is extremely inflammable and may lead to bad burns. Nor should celluloid collars and cuffs be worn on the same grounds. All celluloid goods should be sold in wrappers marked in large red letters: ' Inflammable.' Celluloid it must be remembered is chiefly made of gun-cotton. Celluloid toys, such as bouncing balls, etc., should not be given to children. Celluloid eye-shades I consider dangerous.

Another body, carbon tetrachloride, a heavy volatile and mobile chloroform-like liquid with a pleasant pungent quince-like odour was largely used until recently by hairdressers as a substitute for petroleum as a dry shampoo. It is dangerous and should not

be used. The death of a lady was reported in the papers as a result of the inhalation of the vapour whilst she was being shampooed. I believe the use of carbon tetrachloride has been given up. In any case it is well to mention this occurrence in this place and to say further that dry shampooing is not generally to be recommended. It is astonishing in my experience how casually these dangerous preparations are employed in hairdressing. Strong potash and formalin preparations are also sometimes used in a happy-go-lucky way.

Just as there are only thirty-six dramatic situations, women through the ages have rung the changes on a more or less fixed number of ways of putting up the hair. Fashions in this come and go, but they are not new. Powdering the hair used to be much in vogue in the eighteenth century, and fine houses had their powdering room. Now this mode only survives in the gorgeous flunkeys of some of the great, for the fashion even here is dying out, no doubt as a result of the advent of the motor-car.

As to loss of hair, precocious in man, or as a result of chronic seborrhœa, treatment requires to be adapted to the individual case ; there is no penny-in-the-slot method of dealing with such cases.

Again, the hair may fall out as a result of various morbid conditions and infections, debility, severe illnesses, and so forth. These causes must be disentangled before any line of treatment can possibly give any result. The top hat has been made responsible for baldness, but antique busts not infre-

quently represent the bald, Socrates, for instance. Excessive brain-work has also been brought forward as a cause, but there are plenty of bald men about, who have not as much brain as a healthy rabbit. Other excesses have been made to play a part. On the other hand, an excellent head of hair may go with excessive activities in many directions.

In the scalp, the hair may also come out commencing with small bald circular patches, which by running into one another may denude the head to a great extent or occur as a band of baldness round it. In severe cases, all the hair of the head may fall out and then the eyebrows and eyelashes start coming out, as well as the hair in other parts. The nails may be affected too in some of these cases. Such conditions require careful investigation. Unfortunately there is nothing in the way of prevention that can be recommended. In these cases again, the hair when it grows again is apt to be white, at first at any rate, and take on the ordinary colour of the hair after a time.

Various general diseases affect the scalp locally and lead to bare and sometimes scarred areas that require general treatment. Sudden blanching of the hair has been recorded, but such an occurrence is very open to doubt. In some instances, as during the French Revolutionary period, the blanching in the prisons was due to the fact that the individuals had no access to their hair-dye.

In children, ringworm of the scalp is one of the most troublesome contagious diseases we have to deal

with in London. It is due to a microscopic fungus, a minute plant, which grows down the hair tube. It is this that makes it so difficult to cure. At school-age, it means the loss of months of school-work and socially therefore it is of the utmost importance. Education so-called being compulsory, every child practically runs the risk in our board schools of getting ringworm. Prevention here is of value. All children of school-age, attending primary schools especially, should wear the hair short and their head should be thoroughly shampooed once a week. If parents would see to this a great deal could be done in the way of stamping out the disease, but many parents are so poor and so hunted about by all sorts of authorities, that they become indifferent from sheer want of energy and as a result of malnutrition, some of them living under conditions that are a disgrace to our much vaunted civilization. I have found that persuasion answers much better than forceful measures with penalties attached to them. Children at school should be warned too as to wearing one another's caps. Some forms of ringworm are contracted from domestic pets, cats, dogs, horses, as are also other diseases by the way. Children should not fondle animals over much, if at all, and certainly not allow them to lick their mouth and face.

In ringworm of the head, immediately a patch is discovered, the hair should be all cut off short or if possible shaved and the cap or headgear lined with tissue paper tacked in, the paper being burnt every night. Old linings should be torn out and burnt,

or the hats and caps sacrificed. Care as to any other children in the family and house is essential. In this way much might be done as to prevention and spread to other parts of the scalp or to other children. It is no use dabbing on iodine or using ointments in a half-hearted and futile manner as is usually done. The scalp condition must be first definitely diagnosed and treated thoroughly and with energy, according to the conditions obtaining in any particular district.

Much of what has been said of ringworm might be said of 'nits.' These might be avoided, if the same precautions we have just mentioned were taken as to the insect getting from one head to the other in the first place. Our school-board system is not fair to those parents, who are careful about their children and are cleanly. Here the social problem of poverty and dirt crops up again. If details as to ringworm and nits were taught in our schools, instead of a great deal of useless stuff, such demonstrations would interest the children. As it is the weird answers given in examinations point to the chaos that exists in the mind of the youngsters.

Ringworm of the skin, apart from the scalp, can be readily dealt with and cured. As to some forms, the Eastern or Dhobie itch variety, it is the well-to-do who suffer, in spite of baths and exceptional cleanliness, and these forms are not always easy to get rid of, especially in some situations.

The hairy parts and the body generally are liable to be invaded by animal parasites, and this may happen accidentally to people who are frequently washing

themselves and using plenty of soap and water. Among the Arabs shaving is resorted to no doubt to cut the ground from under the feet of the undesirable guests. The old Greek statues of women show that epilation was the rule. The epilators in Roman days were very expert in removing superfluous hairs and used beautiful forceps for that purpose, which can be seen at the British Museum. But epilation needs to be done repeatedly as the hairs grow again. In order to avoid the trouble of epilation, various powders and applications have been devised from very early times, and especially in the East. Such a one is *Rusma*, which under various fancy names appears in advertisements of the present day. They contain arsenic, but other chemical preparations are also employed. Here again, the hairs are not permanently destroyed. The only way of achieving this is by electrolysis, and this requires to be well done to get any result. The X-rays are not to be recommended though they appeared some years ago to be just the thing that was wanted. But the complications in the way of disfigurement about the lips and chin especially have shelved them for this purpose.

The hair should not be washed too frequently, but the intervals depend very much on the occupation, dust from roads in dry weather, smuts and dirt from the atmosphere as in fogs, the greasiness of the scalp and the amount of perspiration. Some kind of soap is usually necessary to get the head and hair clean. Many of the powders sold for shampooing are fairly reliable, but egg emulsions, being

organic and liable to go wrong, are not recommended. Besides, eggs are not always above suspicion. It is easy too to cover the aroma of none too fresh eggs with some strong scent or other, especially as such emulsions are not likely to be held up to the nose before use.

The prevalent idea that frequent cutting of the hair is good for growth is more or less of a superstition, and the same may be said of singeing the ends and of the electric treatment of the scalp, whatever that treatment may mean. I have seen a number of people now, who had had all this kind of thing done with no result whatever.

As to the so-called Marcel waving, which was probably practised in the days of King Minos of old Crete, this is beneficial in some cases, provided that it is done with care and gentleness and not with unnecessary violence. The tongs must not be too hot either. Curling tongs were used by the Romans. Tight hair-curlers that drag on the hair all night are not recommended, nor are stiff metallic or whalebone brushes. It is important that the hair, where it is long, should have freedom and ventilation at intervals, and this is very advisable when toupets, wigs and pads are worn, especially when the wigs have strong springs. It is not a good thing for wigs to pass from head to head, though in these present days of fancy dress and masquerading mania this is lost sight of.

In hairdressers' shops, the counsel of perfection would be to sterilize hair brushes and shaving brushes

by dry heat, and to use alcohol for cleaning cutting instruments. The shaving brush does far more mischief than the razor, though it is the latter that is usually accused of being the culprit. When the face is cut accidentally, stopping the bleeding by means of the solid stick passing from face to face should not be allowed by the customer. Infections may occur in this way, sometimes serious.

Clippers are very handy and quickly remove the hair at the back of the head and about the neck, but they are not recommended. They are not always easy instruments to put together again when taken to pieces for cleaning, and for that reason they are but too often not cleaned at all.

The revolving hair-brush should have been given up long ago, and sterilized hand brushes used instead. The former is often in a dirty condition and passes from poll to poll without any attempt at cleansing or sterilization. To refuse the use of the aforesaid interesting mechanism requires great firmness, for the barber is a very autocratic person when he gets your head and face in his hands. I have watched with intense interest the look of pain, not unmixed with scorn, that passes over the features of Figaro when such aids are declined, with or without thanks. As to the revolving brush it is bad for the operator himself, for the rapid revolutions of the brush throw up a cloud of minute bits of hair into his mouth and lungs. In conclusion, hair-dressing saloons should be run on aseptic lines as far as possible. And this

is in the interests of the hairdresser as well as of the customers. Such establishments are very few and far between in London, strange as it may seem. Strict aseptic methods cannot be carried out, that would be too much to expect, for it is difficult to make the lay mind grasp the underlying principles. At times, the operator will drop the brush, comb or scissors on the floor. In such a case, fresh sterilized and clean instruments should be used and the soiled ones put on one side for cleaning and sterilizing.

Many men plaster their hair down with sticky messes of various kinds, which are certainly not good for the scalp and hair. Some of these preparations are made up of organic materials, such as honey. In the old days 'pomatum' was much used and 'bear's grease' was also in vogue, so much so that barbers used to advertise the fact of the purchase of a bear in order that there might be no mistake about the grease being the real thing. The origin of the anti-macassar was to prevent soiling the arm-chairs by oiled and be-pomaded heads. And in the more primitive walks of life, a horizontal grease-line was an additional ornament to the bewildering wall-papers from the habit of leaning the head against the wall whilst balancing the body on a chair. All such greases, owing especially to their liability to become rancid, are not good for general use.

As to the eyebrows, we have already referred to pencilling. Various preparations of lamp-black in

sticks are used for this purpose. *Kohol,* a black sulphide of antimony, is employed in the East for the eyebrows and eyelashes. This is a common fashion in Egypt and dates from remote times. In the eighteenth century a dye called *Teinture chinoise* and also sold under the name of *Kohol* was in vogue and is still on the market.

CHAPTER X

TATTOOING

BEFORE leaving the subject of ornamentation, we may here allude to the fashion of tattooing, which obtains among some native races, as the Maories of New Zealand, for instance, who decorate their face with complicated linear and circular patterns. In India, some of these tattoo-marks are indicative of caste, such as the vermilion spot in the centre of the forehead. In the days of cannibalism, tattooing served to distinguish the victors' friends. As Hazlitt puts it: 'The unenlightened savage makes a meal of his enemy's flesh, after reproaching him with the name of his tribe, because he is differently tattooed.' Among the Japanese, tattooing is a fine art, taking the form of polychrome snakes, dragons, and so forth. Some of these are extremely well done, and Europeans visiting the country succumb to the temptation of these elaborate designs. Tattooing is usual among soldiers and sailors. In prisons tattoo-marks are common. Many of these are however very crude, unless they have been done by an Eastern artist. 'I love Mary,' or in the case of women 'I love Jack,' are not unusual, but the trouble arises when the man marries Susan

and the woman takes Charlie unto herself. The point I desire to bring out is that sometimes a serious contagious malady has been inoculated in this way when the operator has used dirty instruments and, what is worse, his own saliva. Tattoo-marks are very difficult to remove. It is out of the question when large surfaces are involved, and even in the case of small designs the results do not amount to much as a rule, though various methods are employed. To achieve anything like a result, time, trouble and perseverance are necessary.

CHAPTER XI

THE NAILS

WE must now refer to the nails. They are structures that are correlated with the hair and teeth, and in some morbid conditions when the general nutrition is affected they may all suffer together. The nails grow forward from the matrix, starting under the nail-fold, over the upper surface of the finger-ends or nail-beds. A blunt, flat instrument can be pushed under the nail fairly readily until the convex part of the half-moon is reached, where the nail is fixed to the underlying parts. After illnesses, transverse furrows may appear indicative of the indisposition, especially on the thumb-nails and the left more usually than the right. In delicate individuals chiefly, white spots may appear in the nails due to air imprisoned between the layers of horny substance that build up the nail-plate or as a result of injuries at the nail-fold. Longitudinal ribbing of the nails is very marked in some individuals and is usually put down to goutiness, why, I do not know. Goutiness means so many thing. The fact is the nail grows in a ribbed manner, which is normally not very obvious, but may become so in disturbances of health or with age. Combined with this, a wavy

appearance may be observed. Or the nail may be spooned, that is depressed into a hollow on its surface. Again, the nails are in some people very brittle, and break and shell off when pared. This is often associated with brittle hair and indifferent or bad teeth, showing deficiencies in the general condition and in the chemical constituents of the body. Some general skin diseases affect the nails, pitting them on the surface or undermining them at their edges. Or the nail-bed may be specially affected and the nail-plates themselves raised by excessive growth of the tissues beneath. The nails again may become claw-like, greatly elongated and sometimes twisted like horns. Or they may be thin and soft, or greatly thickened, dirty and unsightly. This is mainly observed about the toe-nails. That painful condition known as ingrowing toe-nail may be mentioned here in passing; this is usually due to inattention to their periodical cutting and trimming. Ringworm may affect the nails, both of the fingers and toes. It is a very intractable condition to treat and in some cases may go on for years without being diagnosed as such, for it may require a prolonged microscopical examination to find the parasitic fungus. The growth of the nails is slow, but in some subjects they may occasionally grow more quickly than usual. Treatment of the nails requires much perseverance and takes time. In the new-born the nails grow more slowly than at later periods.

The nails may suffer in some constitutional diseases, and then constitutional treatment is necessary, local

applications being insufficient. The nails are abnormally arched and curved from behind forwards in consumption, and the finger-ends may be enlarged too, 'the clubbed fingers.' A drum-stick appearance is observed in some congenital heart conditions. When the finger end has been damaged or partly removed in one way or the other, an attempt at growing a nail of sorts may manifest itself in the stump. The nails are transparent, that is why in good health they appear rosy, but in anæmia for instance, owing to the condition of the blood, this pinkness gives way to pallor. Where the circulation is poor, the colour may be bluish. This occurs too when people suffer from cold or after prolonged bathing in cold water, being very marked in individuals with a poor circulation. In conditions of malnutrition, the nails may become soft.

In all ages the nails have received much attention from the point of view of cosmetics and nowadays manicuring is usual. But with regard to this it should be borne in mind, that manicures as also chiropodists and corn-cutters, should see that their instruments are always clean and sterilized. This is not usually the case. Accidental infections have occurred owing to negligence in this way, especially as regards corns. In the old days of Rome, the manicuring slave and chiropodist was an indispensable person in the toilet-chamber of patrician women as we have already incidentally stated, not only for the hands but for the feet as well in that sandal-wearing age. In a novel by Petronius, who lived

at the time of Nero (about 60 A.D.), in the course of a description of the feast given by Trimalchio, a rich and uneducated upstart, an allusion is made to the attendants who ' pedicured ' the feet of the guests.

Among the Chinese, very long finger-nails are a sign of aristocracy and power. And so long are the nails, that special and expensive protectors are worn to prevent their being injured. Some of the Fakirs of the East make vows never to cut the nails, which grow to inordinate lengths and are said in some cases when the hands are kept clenched to grow into the palms. Benvenuto Cellini during his imprisonment in the castle of St. Angelo, found that his uncut nails gave him much pain and torment. In his ' Memoirs ' he says they grew to such an immoderate length that he could not touch himself without being cut by them ; nor could he put on his clothes, because they pricked and gave him the most exquisite pain.

Some individuals of neurotic tendencies have a bad habit of biting the nails constantly or sucking their thumbs, like the old Egyptian god Horus. Needless to say that children should be broken off this early in life. It is not nice to begin with and moreover it leads to deformity of the nails. In days gone by, biting one's thumb at somebody was considered an insult. The passage in ' Romeo and Juliet ' :—' I will bite my thumb at them ; which is a disgrace to them if they bear it ' will occur to readers.

The nails should be attended to regularly and kept clean, for finger-nails in ' deep-mourning ' are not a

pretty sight. Those who use their hands should wear the nails short and circular at the free ends. Long, pointed nails are all very well for those who have nothing to do and who become slaves to their nails and to manicuring. There are other things in this world besides nail-cutting and polishing the finger-ends. Those who have good half-moons should push the nail-folds back from time to time with a small blunt ivory instrument for that purpose and not a sharp metallic one. Cleanliness with soap and a nail-brush, with a little occasional polishing with a pad, is all that is necessary in the ordinary way. Strong solutions for dipping the finger-ends in during the process of manicuring sometimes lead to inflammation. In the language of manicurists, the margin of skin at the nail-fold is called the cuticle ; —small curved scissors should be used for removing irregularities. But once more all instruments should be thoroughly cleansed and wiped in suitable fluids after use to avoid possible troubles. New emery-boards again should be used for each person and then thrown away. The rule is for emery-boards to be used for one person after the other until completely worn out. This is not good from the point of view of the manicured. Lord Chesterfield, to whom our great Samuel Johnson addressed his famous letter, was very particular about the nails, for he says : ' Nothing looks more ordinary, vulgar and illiberall, than dirty hands and ugly, uneven and ragged nails : the ends of which should be kept smooth and clean (not tipped with black), and small

segments of circles'; and every time that the hands are wiped, rub the skin round the nails backwards, that it may not grow up, and shorten them too much.'

To preserve the nails and hands in various occupations, as in amateur gardening, women should wear suitable gloves. This is a counsel of perfection, for many people have to earn their living by handling fluids and preparations, which interfere with the quality and appearances of the nails. Apart from those who use dyes and strong liquids for cleaning purposes, such as French polishers and others, I would mention here, in connexion with the hands and nails, barmen and barmaids, grocers, hairdressers, and bricklayers. Some of these inflammatory conditions of the fingers are popularly alluded to as barmaid's and bricklayer's itch, but they are not true itch, which is an irritating complaint more generally distributed over the body and due to a minute animal parasite. They are the result of constant wetting of the hands behind the bar and the irritation of mortar, lime and so forth in building operations, the result being an inflammation of an eczematous type. Again, gardeners are liable to similar irritant skin troubles after handling certain plants, such as *Primula obconica, Rhus toxicodendron,* and so forth. In the case of *Primula obconica* and Chinese primula, the inflammatory skin trouble is due to a poisonous substance secreted by the downy hairs about the plant. Fortunately only certain individuals are susceptible, but those who are may suffer again and again.

In arsenical poisoning, the nails and hair, for which arsenic has a selective affinity, reveal the drug on analysis. This fact is important from the medico-legal point of view. In this connexion it may be added, that in the beer-poisoning epidemic in Manchester some years ago, due to the fact that the glucose used for brewing purposes was made with impure sulphuric acid, the skin symptoms observed in many of the cases gave the clue to the origin of the poisoning. The public are very prone to gird at the medical profession, but it was the medical man in this, as in many other obscure maladies and epidemics, who put his finger on the cause.

In this place, identification by finger-prints may be alluded to. The surface of the skin generally is thrown into minute ridges and valleys, but this is most marked and obvious on the pulp of the finger-ends where even with the naked eye ridges and whorls can be readily made out. These patterns vary from individual to individual, and this has led to the identification of criminals leaving the imprint of their finger-ends on paint-work or windows, sometimes blood-stained. Some of these whorls are very beautiful and curious. It has occurred to me that this may have been the origin of the custom of placing the finger on the seal when executing a legal deed. When people generally could not write, in the days when knights were bold and barons held their sway, the imprint of the finger-end on the soft wax (now reduced to the symbolic red paper seal) would have

been a record of the individual. This is mere supposition, I admit.

On the under or palmar surface of the fingers, cross or transverse lines at the folds of the joints will be noticed. From time immemorial these lines have been used for purposes of identification by the Chinese. In official documents and deeds, the imprint of the inter-articular folds of the individual's left index-finger are mapped out in Chinese or what we call more usually Indian ink, and the length of the finger-nail is added, together with the name of the person in Chinese characters. The French have adopted this method in their dealings with the natives in Tonquin and Indo-China.

The sweat pores open out on the tops of the ridges and not in the intervening valley-like depressions we have described. In the excessive sweating of the palms of the hands, this can be well made out by means of a magnifying glass, for in this situation the sweat orifices are very numerous, as sufferers from sweating palms know but too well.

The feet have been dealt with incidentally in other parts of this book. It is only necessary to add here that they should be attended to from the point of view of cleanliness as carefully as the hands. Though it may not always be possible to get a full bath, a foot-bath is generally obtainable.

LONDON, *May* 1914.

INDEX

Printed by T. and A. CONSTABLE, Printers to His Majesty
at the Edinburgh University Press

Methuen's Shilling Library

36	**De Profundis**	Oscar Wilde
37	**Lord Arthur Savile's Crime**	Oscar Wilde
38	**Selected Poems**	Oscar Wilde
39	**An Ideal Husband**	Oscar Wilde
40	**Intentions**	Oscar Wilde
41	**Lady Windermere's Fan**	Oscar Wilde
42	**Charmides and other Poems**	Oscar Wilde
43	**Harvest Home**	E. V. Lucas
44	**A Little of Everything**	E. V. Lucas
45	**Vailima Letters**	Robert Louis Stevenson
46	**Hills and the Sea**	H. Belloc
47	**The Blue Bird**	Maurice Maeterlinck
48	**Mary Magdalene**	Maurice Maeterlinck
49	**Under Five Reigns**	Lady Dorothy Nevill
50	**Charles Dickens**	G. K. Chesterton
51	**Man and the Universe**	Sir Oliver Lodge
*52	**The Life of Robert Louis Stevenson**	Graham Balfour
53	**Letters from a Self-Made Merchant to his Son**	George Horace Lorimer
*54	**The Life of John Ruskin**	W. G. Collingwood
55	**The Parish Clerk**	P. H. Ditchfield
56	**The Condition of England**	C. F. G. Masterman
57	**Sevastopol and other Stories**	Leo Tolstoy
58	**The Lore of the Honey-Bee**	Tickner Edwardes
59	**Tennyson**	A. C. Benson
*60	**From Midshipman to Field Marshal**	Sir Evelyn Wood
62	**John Boyes, King of the Wa-Kikuyu**	John Boyes
63	**Oscar Wilde**	Arthur Ransome
64	**The Vicar of Morwenstow**	S. Baring-Gould
65	**Old Country Life**	S. Baring-Gould
66	**Thomas Henry Huxley**	P. Chalmers Mitchell
*67	**Chitral**	Sir G. S. Robertson
68	**Two Admirals**	Admiral John Moresby
76	**Home Life in France**	M. Betham-Edwards
77	**Selected Prose**	Oscar Wilde
78	**The Best of Lamb**	E. V. Lucas
80	**Selected Letters**	Robert Louis Stevenson
83	**Reason and Belief**	Sir Oliver Lodge
85	**The Importance of Being Earnest**	Oscar Wilde
88	**The Tower of London**	Richard Davey
91	**Social Evils and their Remedy**	Leo Tolstoy
93	**The Substance of Faith**	Sir Oliver Lodge
94	**All Things Considered**	G. K. Chesterton
95	**The Mirror of the Sea**	Joseph Conrad
96	**A Picked Company**	Hilaire Belloc
101	**A Book of Famous Wits**	Walter Jerrold
116	**The Survival of Man**	Sir Oliver Lodge
126	**Science from an Easy Chair**	Sir Ray Lankester

* Slightly Abridged.

Methuen & Co., Ltd. 36 Essex Street, London, W.C.

Methuen's Shilling Novels

1	**The Mighty Atom**	Marie Corelli
2	**Jane**	Marie Corelli
3	**Boy**	Marie Corelli
4	**Spanish Gold**	G. A. Birmingham
5	**The Search Party**	G. A. Birmingham
6	**Teresa of Watling Street**	Arnold Bennett
7	**Anna of the Five Towns**	Arnold Bennett
8	**Fire in Stubble**	Baroness Orczy
9	**The Unofficial Honeymoon**	Dolf Wyllarde
10	**The Botor Chaperon**	C. N. and A. M. Williamson
11	**Lady Betty across the Water**	C. N. and A. M. Williamson
12	**The Demon**	C. N. and A. M. Williamson
13	**The Woman with the Fan**	Robert Hichens
14	**Barbary Sheep**	Robert Hichens
15	**The Guarded Flame**	W. B. Maxwell
16	**Hill Rise**	W. B. Maxwell
17	**Joseph**	Frank Danby
18	**Round the Red Lamp**	Sir A. Conan Doyle
19	**Under the Red Robe**	Stanley Weyman
20	**Light Freights**	W. W. Jacobs
21	**The Gate of the Desert**	John Oxenham
22	**The Long Road**	John Oxenham
23	**The Missing Delora**	E. Phillips Oppenheim
24	**Mirage**	E. Temple Thurston
71	**The Gates of Wrath**	Arnold Bennett
72	**Short Cruises**	W. W. Jacobs
73	**The Pathway of the Pioneer**	Dolf Wyllarde
75	**The Street Called Straight**	Basil King
81	**The Card**	Arnold Bennett
84	**The Sea Lady**	H. G. Wells
86	**The Wild Olive**	Basil King
87	**Lalage's Lovers**	G. A. Birmingham
90	**A Change in the Cabinet**	Hilaire Belloc
92	**White Fang**	Jack London
97	**A Nine Days' Wonder**	B. M. Croker
99	**The Coil of Carne**	John Oxenham
100	**The Mess Deck**	W. F. Shannon
102	**The Beloved Enemy**	E. Maria Albanesi
103	**The Quest of the Golden Rose**	John Oxenham
104	**A Counsel of Perfection**	Lucas Malet
106	**The Wedding Day**	C. N. and A. M. Williamson
107	**The Lantern Bearers**	Mrs. Alfred Sidgwick
108	**The Adventures of Dr. Whitty**	G. A. Birmingham
109	**The Sea Captain**	H. C. Bailey
110	**The Babes in the Wood**	B. M. Croker
111	**The Remington Sentence**	W. Pett Ridge
112	**My Danish Sweetheart**	W. Clark Russell
113	**Lavender and Old Lace**	Myrtle Reed
114	**The Ware Case**	George Pleydell
115	**Old Rose and Silver**	Myrtle Reed
117	**The Secret Agent**	Joseph Conrad
118	**My Husband and I**	Leo Tolstoy
119	**Set in Silver**	C. N. and A. M. Williamson
120	**A Weaver of Webs**	John Oxenham
121	**Peggy of the Bartons**	B. M. Croker
122	**The Double Life of Mr. Alfred Burton**	E. Phillips Oppenheim
123	**There was a Crooked Man**	Dolf Wyllarde
124	**The Governor of England**	Marjorie Bowen
125	**The Regent**	Arnold Bennett
127	**Sally**	D. Conyers
128	**The Call of the Blood**	Robert Hichens
129	**The Lodger**	Mrs. Belloc Lowndes